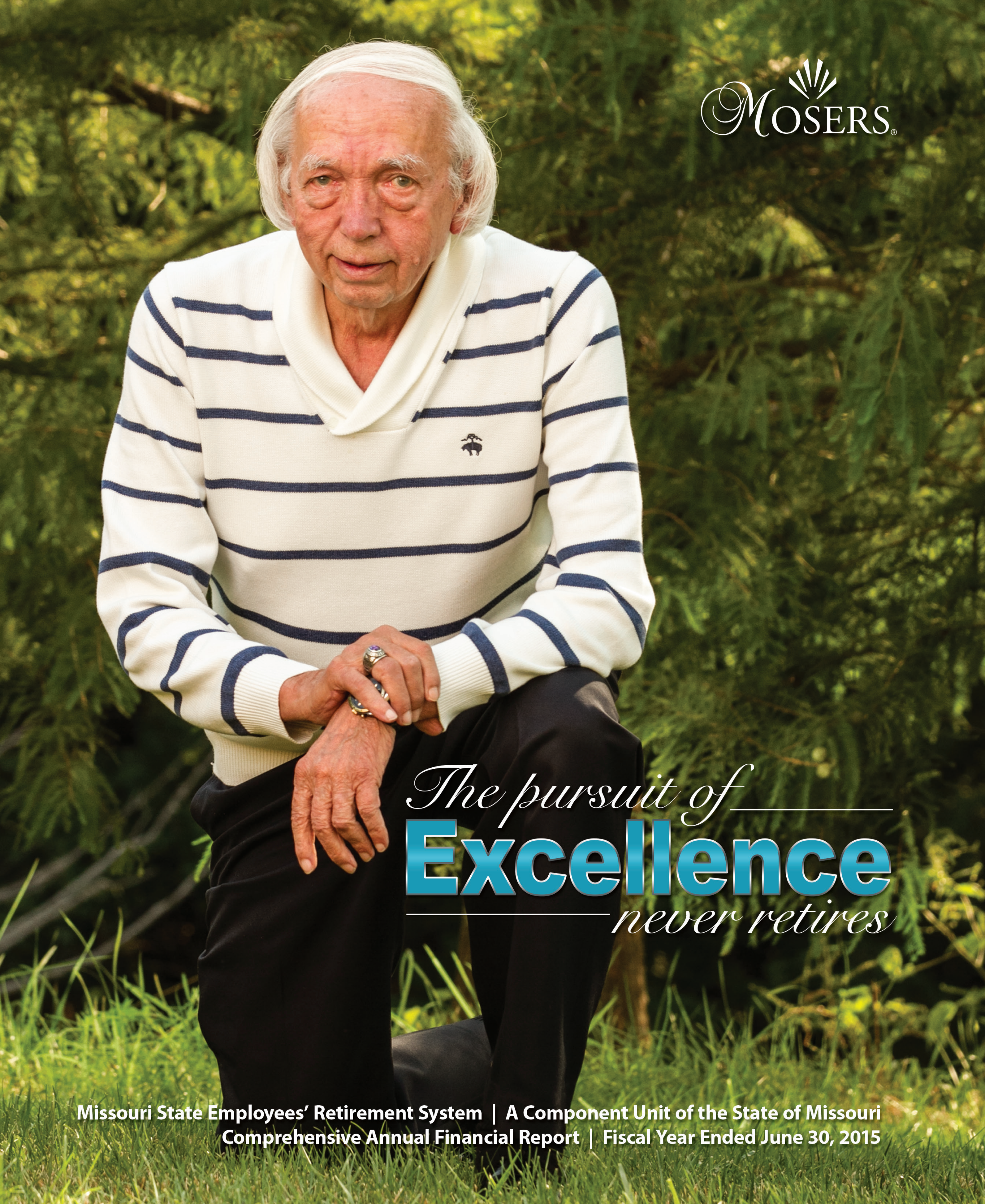

MOSERS

The pursuit of Excellence never retires

Missouri State Employees' Retirement System | A Component Unit of the State of Missouri

Comprehensive Annual Financial Report | Fiscal Year Ended June 30, 2015

★ ★ ★ ★ ★

Excellence and esprit de corps

One thing that was drilled into me in the military was that organizational excellence or failure to achieve excellence is largely dependent on the “esprit de corps” or lack thereof within the organization. By definition, esprit de corps is the common spirit existing in the members of a group and inspiring enthusiasm, devotion, and strong regard for the honor of the group.

An example of this I recall learning of had to do with the elite 101st Airborne Division when they were dramatically outnumbered and pinned down in the Belgium town of Bastogne. A captain was describing the situation to his troops, indicating that they were low on supplies and ammunition and had no source of resupply or support from other units and otherwise painted a picture that was quite dire. He concluded by saying it was expected that the enemy would mount a full scale assault the first thing in the morning. A private broke the silence that followed with the simple statement, “Those poor bastards.” That’s esprit de corps. (By the way, despite sustaining very heavy casualties, they held on and prevailed once reinforcements arrived.)

I am extremely proud of the conviction and dedication with which the employees at MOSERS approach all that they do – their belief in themselves, their belief in each other and in their focus on individually and collectively delivering exceptional services to our members. That’s esprit de corps here. If we had a mantra it would be “Excellence Always.” The people here don’t just say it – they live it.

— *Gary Findlay, Retiring Executive Director*

Years of Service: 1994 - 2015

The pursuit of Excellence never retires

Gary Findlay
Executive Director

Michele Nix
Chief Finance Officer

Missouri State Employees' Retirement System | A Component Unit of the State of Missouri
Comprehensive Annual Financial Report | Fiscal Year Ended June 30, 2015

Photos appearing in the CAFR were taken by MOSERS staff members Brooke Rowden, Sr. Marketing Technologist Amber Arnold, Benefit Counselor and Tracy Upschulte, Senior Strategic Communications Analyst.

Our Mission

★ ★ ★ ★ ★

As a MOSERS' employee, I had the opportunity to work in several service areas. Whether it was accounting, benefits, records management or communications, the many talented people at MOSERS were always focused on their commitment to excellence. There were many technological advancements throughout the years; there were legislative changes and personnel changes, but what never changed was the goal — provide financial security and excellent customer service to members of the system.

— Sandi Lynn, Retired Communications Manager
Years of Service: 1987 - 2007

Introductory Section

★ ★ ★ ★ ★

I think what has always impressed me the most is MOSERS' commitment to excellence. The philosophy of "what gets measured, gets managed and what gets managed, gets done" is key throughout the organization. Staff continually looks for ways to improve returns, customer service and cost-effectiveness by way of measuring their performance against various benchmarks without losing sight of their mission to provide financial security for state employees. It was both an honor and a privilege to work there for over 23 years.

— Judy Delaney, Retired Legislative Policy Coordinator
Years of Service: 1992 - 2015

Introductory Section

Professional Awards

Certificate of Achievement for Excellence in Financial Reporting

MOSERS' *Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2014, was awarded the Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association of the United States and Canada (GFOA). This was the 26th consecutive year that MOSERS has received this prestigious award. The Certificate of Achievement is the highest form of recognition for excellence in state and local government financial reporting. To be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report (CAFR). The CAFR must satisfy generally accepted accounting principles, applicable legal requirements and GFOA reporting standards.

Public Pension Standards Award

MOSERS received the Public Pension Standards Award from the Public Pension Coordinating Council (PPCC) in 2014, in recognition of meeting professional standards for plan design and administration as set forth in the Public Pension Standards. This award is presented by the PPCC, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).

Letter of Transmittal

Missouri State Employees' Retirement System
Mailing Address: PO Box 209, Jefferson City, MO 65102-0209
Phone: (573) 632-6100 • (800) 827-1063 | Fax: (573) 632-6103
MO Relay: 7-1-1 (Voice) • (800) 735-2966 (TTY)
Website: *www.mosers.org* | Email: *mosers@mosers.org*
Visit us at 907 Wildwood Drive, Jefferson City, MO

MOSERS®
WE ARE HERE FOR YOUR BENEFIT.

October 16, 2015

The Board of Trustees
Missouri State Employees' Retirement System
907 Wildwood Drive
Jefferson City, MO 65109

Dear Board Members:

It is my pleasure to submit the 2015 *Comprehensive Annual Financial Report* (CAFR) of the Missouri State Employees' Retirement System (MOSERS). This CAFR is a presentation of the financial results for MOSERS within the specific timeframe of the last fiscal year. These financial results provide useful measurements for the evaluation of programs, designed to advance the financial security of our members. At MOSERS, we place a strong focus on transparency and the measurement of results, as a way to guide our actions and provide a foundation for strategic decision making. We are proud to serve Missouri's public employees and proud to work for Missouri.

In FY15, MOSERS' investments generated a time-weighted return of (2.64)%, net of fees. The total fund return trailed its policy benchmark by 0.90%. The five year annualized return of 9.64% produced $266 million, net of fees, in excess of the policy benchmark for that period.

Report Contents and Structure

This CAFR is designed to satisfy the reporting requirements of state law as stipulated in Sections 104.480, 104.1006, and 105.661 of the Revised Statutes of Missouri (RSMo), as amended. Management has prepared the basic financial statements of MOSERS and is responsible for the integrity and fairness of the information presented. Some amounts included in the financial statements and elsewhere may be based on estimates and judgments. These estimates and judgments were products of the best business practices available. The accounting policies followed in preparing the basic financial statements conform with U.S. generally accepted accounting principles. Financial information presented throughout the CAFR is consistent with that which is displayed in the basic audited financial statements.

Ultimate responsibility for the CAFR and the basic financial statements rests with the board of trustees. The executive director and the MOSERS staff assist board members in fulfilling their responsibilities. Systems of internal controls and supporting procedures are maintained to provide assurances that transactions are authorized, assets are safeguarded, and proper records are maintained. These controls include standards in the hiring and training of employees, the establishment of an organizational structure, and the communication of policies and guidelines throughout the organization. Internal controls are reviewed through internal audit programs and all internal audit reports are submitted to the board of trustees. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and the valuation of cost and benefits requires estimates and judgments by management.

Williams-Keepers, LLC conducted an independent audit of the basic financial statements in accordance with U.S. generally accepted auditing standards. This audit is described in the *Independent Auditors' Report* on page 19 in the *Financial Section*. Management has provided the external auditors with full and unrestricted access to MOSERS' staff to discuss their audit and related findings, to facilitate independent validation of the integrity of the plan's financial reporting, and verify the adequacy of the internal controls in place.

The *Financial Section* also contains the *Management Discussion and Analysis* that serves as an introduction to and overview of the financial statements. MOSERS is considered a component unit of the state of Missouri for financial reporting purposes and, as such, the financial statements in this report are also included in the *State of Missouri Comprehensive Annual Financial Report*.

Profile of MOSERS

MOSERS is a body corporate and an instrumentality of the state of Missouri that was established in 1957 by state law, under the management of a board of trustees, for the purpose of providing retirement benefits to most state employees. MOSERS provides for those retirement benefits through pension trust funds, in keeping with the fiduciary responsibilities of the board members, staff, and certain outside service providers.

Subsequent to its creation, MOSERS was further assigned the task of providing most members of the retirement system with term life and long-term disability insurance. MOSERS maintains an internal service fund to account for the flow of funds related to this insurance and contracts with insurance companies to provide those benefits through insured defined benefit plans. MOSERS maintains membership information on those eligible for the insurance coverage and collects and remits the premiums to the insurance company. Currently, the life and long-term disability insurance plans are insured through a third-party, The Standard insurance company, with oversight by MOSERS.

The State of Missouri's Deferred Compensation Plan is accounted for as an internal service fund through a contractual relationship with ICMA-RC as the third-party record keeper with oversight by MOSERS. Investment options are made available to participants who retain responsibility for the investment of their individual accounts.

Governmental Accounting Standards Board (GASB) Accounting Changes

MOSERS implemented GASB Statement 68, *Accounting and Financial Reporting for Pensions* for the year ending June 30, 2015. GASB 68 governs how public pension plan sponsors (i.e. employers) report their share of pension liability and expense on their financial statements. GASB 68 resulted in significant changes in the accounting and reporting for pension plan activity by employers. Information necessary to implement the new standard was provided to employers by MOSERS' Office of Internal Audit, our external actuarial firm Gabriel, Roeder, Smith & Company (GRS) and our external auditing firm Williams-Keepers LLC. The total pension liability was determined through information at the prior valuation date of June 30, 2014, as allowed by GASB 68, to be allocated to the state of Missouri and related component units for FY15 financial reporting purposes.

Strategic Planning

MOSERS' staff continued a formal strategic planning effort involving staff that began in FY12. Currently, MOSERS is engaged in its second cycle of strategic planning for FY15-17. As a result of this planning, five key initiatives were established which include Customer Service, Leadership, Staff, Business Processes and Technology. As of June 2015, which is the midpoint of the 2-year strategic planning cycle, 62% of the objectives in the plan were completed. These initiatives direct staff goals and help identify organizational priorities such as increasing stakeholder engagement, fulfilling organizational legal and ethical responsibilities and optimizing business processes for increased sustainability.

Budgeting

The MOSERS Board of Trustees annually approves the administrative expense budgets for MOSERS' operations and investment departments. MOSERS' governance policy requires an exception report to the board of trustees by the executive director if expenses are expected to exceed budgeted amounts by 10% and to seek board approval in advance for any unscheduled salary increases or staff expansions not included in the budget approved by the board before the beginning of the fiscal year. There were no budget exceptions to report for the year.

Personnel Changes

MOSERS has a sizable number of employees becoming eligible for retirement in the next five years, including turnover in leadership. The search for a new executive director continued in FY15 and was completed in FY16. During FY15, EFL Associates conducted in-depth interviews with board and staff members to better understand MOSERS and the knowledge, skills, and abilities the MOSERS Board of Trustees was seeking in the next executive director who will begin employment in September 2015. A total of 10 MOSERS' employees retired during FY14 and FY15. An additional 10 employees will become eligible to retire in the following fiscal year. Currently, the average length of MOSERS' service for all employees is approximately 10 years and the average length of total state service for all MOSERS' employees is just over 14 years.

During FY15, the structure of the investment department underwent changes due to the promotion of two staff members to new deputy CIO positions. As a result, the managing director of beta-balanced strategies position no longer exists. The individual who held that position is now deputy CIO and will become CIO upon the retirement of the current CIO. The former managing director of investment risks and operations is now the deputy CIO – risk and operations.

Risk Management Enhancements

Risk management is a critical component of MOSERS' business activity. Our risk management consultant, Charlesworth & Associates, has opined that insurance coverage has been designed around the risks to which the system is exposed and the philosophy regarding funding of potential loss. Additionally, it is the consultant's opinion that "MOSERS continues to excel in risk management practices throughout the year." Our insurance risk management consultant helps ensure that the insurance coverage is consistent with industry standards and that MOSERS is receiving the best rates available. There are no asset protection exceptions to report for the year.

MOSERS embarked on a Business Process Improvement (BPI) initiative that included business process mapping and analysis to identify process efficiencies and mitigate risk. After having identified over 600 business processes, 250 of them have been documented. Sections have identified individual liaisons to work with the Project Management Office (PMO) to document more procedures going forward to provide a systematic examination and improvement of MOSERS' business processes and to add value, improve effectiveness, efficiencies, and adaptability of MOSERS' operations.

Business Continuity Plan Implementation

MOSERS' business continuity plans are the first line of defense in the aftermath of a business interruption. The Business Continuity Steering Committee conducted a semi-annual Business Impact Analysis and, as a result, implemented a plan to upgrade MOSERS' warm site capabilities at Huber & Associates. These upgrades include installing a dedicated line for internet capability to provide the necessary bandwidth requirements to support critical business functions in the event of an unanticipated business interpretation.

Deferred Compensation and College and University Retirement Plans

The MOSERS Board of Trustees is responsible for oversight of the State of Missouri Deferred Compensation Plan (the Plan) and the College and University Retirement Plan (CURP), which includes, but is not limited to, contracting with record keepers, plan administrators and investment managers, providing communications and ensuring that the plans are in compliance with federal and state law. Deferred compensation plan participation is voluntary, for eligible members, including college and university employees.

As of June 30, 2015, there were 62,041 participants (37,821 active and 24,220 terminated/retired) in the State of Missouri Deferred Compensation Plan. Of all eligible employees (including public university employees), over 61% participate in the Plan. Active employee plan participation was up 5.5% from FY14. Total participants (both active and terminated) increased by 3,259 during the fiscal year. Plan assets total $1,847,678,602. ICMA-RC is the plan record keeper.

The Plan investment options consist of 13 custom-designed target-date investment options, a stable income fund, a brokerage window option, the MIP Fund (offering participants the ability to purchase units of MOSERS investment portfolio), and 26 closed legacy mutual fund options (consisting of a variety of domestic equity, international equity, fixed income, and lifestyle/balanced mutual funds). Assets in the MIP as of June 30, 2015, total $4,288,583 held by 186 investors.

The board also has responsibility for oversight of CURP, a 401(a) defined contribution plan for education employees hired after June 30, 2002, by the regional colleges and universities that participate in MOSERS. The employer contribution rate is 1% of payroll, less than the employer normal cost of the defined benefit plan for general state employees. TIAA-CREF is responsible for third-party administration and for providing investment products and education to members in the plan. Current plan assets total $63,737,645 with 2,413 participants.

Technology Updates

MOSERS relies on technology to enhance the member experience, increase the efficiency of operations and mitigate risk. In FY15, we continued to enhance the online retirement application process (ORAP) that is available on the member portal. Members can now upload any forms and proof documents necessary to complete the retirement application process.

The process of converting the MOSERS image repository is almost complete and over 16 million documents have been imported into the new system and over 200 in-house legacy programs have been replaced by 56 custom work flows.

During FY15, a comprehensive security assessment was performed by Nexum, Inc. which consisted of various onsite and remote information security testing projects which resulted in recommendations that are being implemented to increase the security of our systems and information. Our staff continues to be diligent in the assessment and identification of any cyber-security threats.

Cost Effectiveness Measurement

Customer service is a critical element in MOSERS' performance objectives. One of the ways MOSERS measures overall performance is through CEM Benchmarking, Inc. (CEM). CEM evaluated 56 leading pension systems, including systems in the United States, Canada, Denmark, United Arab Emirates, and the Netherlands. MOSERS' peer group included 11 U.S. public pension plans that are identified as the most relevant peer group based on membership size and system assets. This year, the CEM results indicated that MOSERS' service ranked number one again in the peer group and the third highest in CEM's global universe. MOSERS' service score was 90, well above the peer median and an average of 78 and the all CEM median of 76. In an effort to keep costs down and enhance our processing time, we will continue to implement changes that simplify processes, eliminate redundant programs, and/or provide enhanced security in an effort to keep costs down and expedite our processing time.

CEM measures the cost of service on an annual per participant basis (including active members and benefit recipients). We have 93,000 such participants while the median number within our peer group is 153,000 and the peer average is 132,000. Our cost of $74 per active member and annuitant was equal to the peer median and well below the peer average of $112. In addition, our overall complexity score remains below the peer median (with simplicity being viewed as a positive).

Summary of Financial Information

The following schedule is a comparative summary of the pension trust funds' additions and deductions for the years ended June 30, 2015, and June 30, 2014.

Pension Trust Funds

	Year Ended June 30, 2015	Year Ended June 30, 2014
Additions	$145,791,105	$1,881,671,722
Deductions	(767,712,413)	(717,285,347)
Net change	$(621,921,308)	$1,164,386,375

The following schedule is a comparative summary of the revenues and expenses of the *Internal Service Funds* (insurance and deferred compensation activity) for the years ended June 30, 2015, and June 30, 2014.

Internal Service Funds

	Year Ended June 30, 2015	Year Ended June 30, 2014
Operating revenues	$ 30,658,038	$ 31,043,174
Operating expenses	(31,138,744)	(30,318,997)
Nonoperating revenue	12,549	11,886
Net change	$ (468,157)	$ 736,063

Additional financial information can be found in the *Management Discussion and Analysis Report*, the financial statements, and schedules included in the *Financial Section* of this report.

Investments

MOSERS' investments generated a time-weighted return of (2.64)%, net of fees, for FY15. The total fund return trailed its policy benchmark by 0.90%. The five year annualized return of 9.64% produced $266 million, net of fees, in excess of the policy benchmark for that period. Additional information regarding the investments of the pension trust funds can be found in the *Investment Section* of this report.

Plan Financial Condition/Funded Ratio

The financial statements are prepared in accordance with the Generally Accepted Accounting Principles and do not affect the funding requirements for the defined benefit plan, which continue to be calculated based on annual actuarial valuations in conformity with generally accepted actuarial principles in accordance with the Actuarial Standards of Practice issued by the Actuarial Standards Board and applicable statutes.

The funding objective of MOSERS' pension trust funds is to meet long-term benefit promises through contributions that remain approximately level as a percent of member payroll over decades of time. Historical information relating to progress in meeting this objective is presented in the *Employer Schedule of Funding Progress* on page 100. During the year ended June 30, 2015, the actuarial funded ratio of the Missouri State Employees' Plan, which covers 113,377 participants, declined from 75.1% to 75.0%, primarily the result of the unfavorable investment market experience in the current fiscal year.

Funding of the Judicial Plan, which covers 974 participants, began on July 1, 1998. During the year ended June 30, 2015, the actuarial funded ratio of the Judicial Plan increased from 26.9% to 27.8%. Additional information regarding the financial condition of the pension trust funds can be found in the *Actuarial Section* of this report.

Awards

MOSERS was awarded the Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association of the United States and Canada (GFOA) for its comprehensive annual financial report for the fiscal year ended June 30, 2014. This was the 26th consecutive year that MOSERS has received this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. The report must satisfy generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

MOSERS received the Public Pension Coordinating Council (PPCC), Public Pension Standards Award, in recognition of meeting the professional standards for plan design and administration as set forth in the Public Pension Standards. This award is presented by the PPCC, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR).

GFOA also presented MOSERS with an Award for Outstanding Achievement in Popular Annual Financial Reporting for our summary annual report. This was the 19th year that MOSERS received this award.

These prestigious awards recognize MOSERS for financial and professional standards of excellence and are gratifying to MOSERS' staff. These notable awards can be viewed on page 5.

Conclusion

This report is a product of the combined efforts of MOSERS' staff and advisors functioning under the board's leadership. It is intended to provide complete and reliable information that facilitates the management decision making process, serves as a means for determining compliance with legal requirements, and allows for the evaluation of responsible guardianship of system funds. As in the past, MOSERS received an unqualified opinion from our independent auditor on the financial statements included in this report. The opinion of the independent auditor is on page 19.

Copies of this report are provided to the Governor, State Auditor, the Joint Committee on Public Employee Retirement of the General Assembly, and all state agencies that form the link between MOSERS and its members. Their cooperation contributes significantly to the success of MOSERS.

I would like to take this opportunity to acknowledge the board, MOSERS' staff, trusted advisors and colleagues who have tirelessly given their time and expertise to exceed expectations and advance the financial security of our members. It takes a group of very special people to commit to their jobs on a daily basis through both good and challenging times. I am extremely grateful for the opportunity I have had to play a role in the delivery of benefit services to the dedicated hard working public servants who have chosen state employment as an important part of their career paths. It has been rewarding beyond my expectations when I arrived in 1994. As part of a plan that I agreed to with the board of trustees in 2012, I will be joining the ranks of MOSERS' retirees at the beginning of 2016. I am looking forward to field testing our product and am confident that MOSERS will continue to serve the interests of the membership with the same focus on and commitment to excellence in the future as has been the case in the past because above all, what I know for sure is that, the pursuit of excellence never retires.

Respectfully submitted,

Gary Findlay

Gary Findlay
Executive Director

Letter from the Board Chair

Missouri State Employees' Retirement System
Mailing Address: PO Box 209, Jefferson City, MO 65102-0209
Phone: (573) 632-6100 • (800) 827-1063 | Fax: (573) 632-6103
MO Relay: 7-1-1 (Voice) • (800) 735-2966 (TTY)
Website: *www.mosers.org* | Email: *mosers@mosers.org*
Visit us at 907 Wildwood Drive, Jefferson City, MO

MOSERS®
WE ARE HERE FOR YOUR BENEFIT.

October 16, 2015

Dear Members:

On behalf of the board of trustees, I am pleased to present the MOSERS *Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2015. While the focus of this report is on information related to the financial status of your retirement system, it also highlights other changes that occurred during the year. The *Financial Section* of this report is prepared in accordance with generally accepted accounting principles and includes financial statements that are appropriately attested to by the system's independent auditors.

MOSERS' investments generated a time-weighted return of (2.64)% net of fees for FY15, trailing the policy benchmark by 0.90%. Although this return is lower than those generated the past two years (19.15% in FY14 and 10.4% in FY13), it reflects the volatility that the financial markets experienced through this fiscal year. As indicated in this report, the five year annualized MOSERS' return is 9.64% producing $266 million, net of fees, in excess of the policy benchmark for that period.

Your retirement system continues to achieve high marks in the delivery of customer service to our members. One of the ways operational performance is measured is through the CEM Benchmarking, Inc. (CEM). CEM evaluated 56 leading pension systems, including systems in the U.S., Canada, Denmark, United Arab Emirates, and the Netherlands. MOSERS' peer group included 11 U.S. public pension plans that are identified as our most relevant peer group based on membership size and system assets. This year, the CEM results indicated that MOSERS' service ranked number one again in our peer group and was ranked the third highest in CEM's global universe of 56 plans. Our cost per active member and annuitant decreased to $74 (from $76) and was well below the peer average of $112 per member.

I am pleased to report that Seth Kelly, MOSERS Deputy CIO, was recognized by *Chief Investment Officer* magazine as one of its "40 under 40" for 2015. This honor recognizes excellence in the investment arena for those under age 40. Seth has been a part of the MOSERS' investment team since 2004 and has been selected as the 2016 successor CIO. While MOSERS has always been aware of Seth's capabilities, we are proud of his recognition within the industry.

As a new day dawns on MOSERS' leadership, I would be remiss if I did not acknowledge the imminent departure of the MOSERS' Executive Director, Gary Findlay. Hired by the board in 1994, Gary has been a steadfast example of true leadership for more than 21 years. During my MOSERS' board tenure, I have found Gary to be exceptional in his ability to motivate and manage our exceptional staff. His guidance and direction have been paramount in the reputation of excellence that MOSERS enjoys today. On behalf of the board, I extend my sincere appreciation to Gary for his years of service and dedication to MOSERS and its mission. It is our hope that Gary will experience every happiness in his well-deserved retirement.

The board experienced some turnover this year. On behalf of the board and staff, I would like to thank Laura Davis for her hard work and active member representation while serving as a trustee to the system. Two new active member trustees were added to the board this fiscal year. Crystal Wessing and Shannon Owens were elected from a field of eight candidates and began their tenure in January 2015. We welcome these new members and know they will make valuable contributions. Don Martin also continued his board service after a successful re-election as the retiree representative. It is important to remember, trustees devote many hours in fulfilling their fiduciary duties and serve with no remuneration.

I wish to thank the entire board for their contributions this year as well as the staff for maintaining the high level of expertise and professionalism required in the pursuit of excellence in all of the activities in which we are involved. Lastly, I wish to express my gratitude to you, our members, for continuing in public service. Your dedication and commitment to providing services to Missouri citizens is greatly appreciated.

In closing, the board of trustees and staff look forward to serving your future needs. If you have any questions regarding this report or any other aspect of MOSERS, please contact us at MOSERS, P.O. Box 209, Jefferson City, Missouri 65102 or call 800-827-1063. Our website can also be visited at *www.mosers.org*.

Sincerely,

Antwaun Smith

Antwaun Smith, Chair
Board of Trustees

Board of Trustees








Administrative Organization

Gary Findlay
Executive Director

- **Greg Beck,** *Chief Auditor*
- **Judy Delaney,** *Legislative & Policy Coordinator*
- **Jake McMahon,** *Chief Counsel*
- **Lisa Verslues,** *Human Resources Coordinator*

Karen Stohlgren
Deputy Executive Director
Chief Operations Officer (COO)

- **Stacy Gillmore,** *Chief Technology Officer*
- **Lori Leeper,** *Board & Operations Projects Coordinator*
- **Krista Myer,** *Budget & Quality Assurance Coordinator*
- **Michele Nix,** *Chief Finance Officer*
- **Pam Palmquist,** *Chief Benefits Officer*
- **Candy Smith,** *Communications & Strategic Planning Coordinator*

Rick Dahl
Deputy Executive Director
Chief Investment Officer (CIO)

- **Shannon Davidson,** *Deputy CIO - Investment Risk & Operations*
- **Omar Davis,** *Investment Legal & Compliance Counsel*
- **Seth Kelly,** *Deputy CIO*
- **Pat Neylon,** *Manager - Liquid Alpha Strategies*
- **Scott Peppard,** *Manager - Illiquid Alpha Strategies*
- **Cindy Rehmeier,** *Manager - Defined Contribution Plans*

About MOSERS

Purpose

MOSERS was established September 1, 1957, and is governed by laws of the state of Missouri.

MOSERS provides retirement, survivor, and disability benefits, as well as life insurance and deferred compensation plan management to its members.

MOSERS administers retirement benefits for most state employees, including members of the Missouri General Assembly, elected state officials, and judges. MOSERS is responsible for administering the law in accordance with the expressed intent of the Missouri General Assembly and bears a fiduciary obligation to the state employees who are its members and beneficiaries.

Administration

State law provides that responsibility for the administration of MOSERS is vested in an 11-member board of trustees. The board is comprised of:

- Two members of the Senate appointed by the President Pro Tem of the Senate.
- Two members of the House of Representatives appointed by the Speaker of the House.
- Two members appointed by the Governor.
- The State Treasurer.
- The Commissioner of Administration.
- Three other system members: two active members elected by the active and terminated-vested members, and one retiree elected by the retired members.

The day-to-day management of MOSERS is delegated to the executive director who is appointed by the board and serves at its pleasure. The executive director acts as advisor to the board on all matters pertaining to the system, contracts for professional services, and employs the remaining staff needed to manage the system.

Organization

The executive director, chief operations officer (COO), and chief investment officer are responsible for planning, organizing, and administering the operations of the system under the broad policy guidance and direction of the board.

Senior Leaders

The senior leaders provide administrative support by assisting the executive director and COO in the major legal, operational, and oversight functions of the retirement, benefit, communication programs, and clerical support. Human resources is also represented in this section.

MOSERS' office is divided into five administrative sections that perform specific functions for the system.

Benefit Administration and Education

Staff in the benefit administration and education section are responsible for all member data, benefit verifications and inceptions, as well as contact with the membership regarding the benefit programs administered by MOSERS (retirement, life insurance, and long-term disability). They also conduct educational seminars in 16-plus cities around the state each year and host webinars online to inform members about their MOSERS' benefits.

Financial and Facilities Oversight

Responsible for all financial records of the programs administered by MOSERS, including the preparation of financial and statistical reports and purchasing functions for MOSERS lies within the financial and facilities oversight section. They interface with the investment consultant, internal investment managers, Office of Administration accounting, State of Missouri employers, life insurance companies, actuaries, banks, and the IRS. They are also responsible for all billing, payment processing and balancing of member and employer contributions. This section provides payroll, mail services, imaging, records management and general building maintenance.

Information Technology and Systems Development

The information technology and systems development section provides computer and technical design support for MOSERS' data processing activities. This team is responsible for developing and maintaining the automated systems that are used to administer the plan. They are also responsible for the document imaging system, network, unified communication system and personal computers. Information technology and the performance excellence and public relations are jointly responsible for MOSERS' website.

Investments

The investments staff provides investment management and consulting services to the system. Primary functions include managing assets internally, selecting external managers for portions of the portfolio, researching and implementing portfolio allocation shifts and rebalancing, providing technical advice, serving as a liaison to the investment community, and informing and advising the board and executive director on financial, economic, and political developments which may affect the system. The investments staff works closely with external investment consultants, legal counsel and the executive director.

Performance Excellence and Public Relations

- **Budget and Quality Assurance** - The responsibilities of this area include annual budget preparation (shared with financial oversight); monitoring of the appropriations process during the annual legislative session; benchmarking; business continuity preparation and planning; and business process mapping and analysis to identify process efficiencies and mitigate risk. They strive to deliver quality products to both internal and external stakeholders, and to provide a systematic examination and improvement of MOSERS' budget and business processes to add value and improve the effectiveness, efficiencies, and adaptability of MOSERS' operations.
- **Communications and Strategic Planning** - Communications and strategic planning staff are responsible for presenting information in clear and concise ways to facilitate effective, well-informed decision-making, planning, and action. They produce materials for members regarding the benefits administered by MOSERS including publications such as newsletters, handbooks, forms, brochures, and the annual report. Additionally, this team works in conjunction with information technology and systems development on electronic materials and tools such as the public, board, secure member, and internal websites. This section coordinates activities and processes for the organization that facilitate strategic thinking, planning, and implementation.

Outside Professional Services

Actuary
- Gabriel, Roeder, Smith & Co.

Auditor
- Williams-Keepers, LLC

Legal Counsel
- Thompson Coburn, LLP
- CT Corporation
- Steptoe & Johnson, LLP

Master Custodian
- Bank of New York Mellon

Investment Management Consultants
- Alliance Bernstein Defined Contribution Investments
  Target Date Fund Consultant
- Blackstone Alternative Asset Management, LP
  Hedge Fund Asset Consultant
- Purrington Moody Weil, LLP
  Trading Consultant
- Summit Strategies Group
  General Asset Consultant
- TimberLink Consulting, LLC
  Timberland Consultant

Risk Management Consultant
- Charlesworth & Associates, LC

Third-Party Administrators
- ICMA-RC
  Deferred Compensation Plan
- The Standard
  Disability and Life Insurance
- TIAA-CREF
  College & University Retirement Plan

Securities Lending Advisor
- Deutsche Bank AG, New York Branch

Strategic Planning
- Orion Development Group

Information Technology Consulting
- Avtex Solutions, Inc.
- Huber & Associates, Inc.
- HyperGen, Inc.
- Nexum, Inc.

Human Resources Consulting
- CBIZ Benefits & Insurance Service, Inc.
- EFL Associates

Investment Risk Management
- MSCI BarraOne

Investment Advisors
- Actis, LLP
- Aeolus Capital Management, Ltd.
- Alinda Capital Partners, LLC
- American Industrial Partners
- AQR Capital Management, LLC
- Axiom Asia Private Capital
- Axxon Group Private Equity Assessoria, Ltda.
- Bayview Asset Management, LLC
- BlackRock Financial Management, Inc.
- Blackstone Alternative Asset Management, LP
- Blackstone Real Estate Partners
- Blakeney Management, Ltd.
- Brevan Howard Capital Management, Ltd.
- Bridgepoint Capital, Ltd.
- Bridgewater Associates, LP
- Campbell Global

Outside Professional Services continued on page 18

Outside Professional Services continued from page 17

- CarVal Investors, LLC
- Castlelake
- Catalyst Capital Group, Inc.
- Catterton Partners
- Claren Road Asset Management, LLC
- Cornwall Capital Management, LP
- Davidson Kempner Capital Management, LLC
- DDJ Capital Management, LLC
- Development Partners International
- Diamondback Capital Management, LLC
- DRI Capital, Inc.
- EIG Global Energy Partners, LLC
- Elliott Management Corporation
- Empyrean Capital Partners, LP
- Eton Park Capital Management, LP
- Farallon Capital Management, LLC
- Glenview Capital Management, LLC
- Global Forest Partners, LP
- Harvest Fund Advisors, LLC
- HBK Capital Management, LP
- JLL Partners
- King Street Capital Management, LP
- Linden Capital Partners, LLC
- Mast Capital Management, LLC
- Merit Energy Company
- MHR Fund Management, LLC
- Millennium Technology Value Partners, LP
- Moon Capital Management, LP
- New Mountain Capital, LLC
- NISA Investment Advisors, LLC
- Oaktree Capital Management, LP
- Pacific Alternative Asset Management Company, LLC
- Perry Capital, LLC
- Pharo Global Advisors, Ltd.
- Resource Management Service, LLC
- Silchester International Investors
- Silver Creek Capital Management, LLC
- Silver Lake Management, LLC
- Silver Point Capital, LP
- SIR Capital Management, LP
- Siris Capital Group, LLC
- State Street Global Advisors
- Stepstone Group
- Stone Harbor Investment Partners, LP
- TPG-Axon Management, LP
- Veritas Capital Fund Management, LLC
- Viking Global Investors, LP
- Visium Asset Management, LP
- Voya Investment Management
- Wellington Management Company, LLP

★ ★ ★ ★ ★

Since retiring, my husband and I have lived in several states and made friends all over the West. As is not always the case of our friends who retired from the private sector, we are fortunate to have a great retirement plan with benefits we know we can count on to always be there for us. Keep up the good work!

— Sally Gillmore, Retired Manager of Member Services
Years of Service: 1986 - 1996

Financial Section

★ ★ ★ ★ ★

I was privileged to have worked at MOSERS under the leadership of Gary Findlay. Excellence was not just a word, it was a way of life and the focus of every decision made at MOSERS. I trust future generations of MOSERS' employees will carry on that philosophy, and will strive to provide even better service to the employees of the state of Missouri.

— Gary Irwin, Retired Chief Finance Officer
Years of Service: 1982 -2013

Financial Section

Independent Auditors' Report

WILLIAMS KEEPERS LLC
CERTIFIED PUBLIC ACCOUNTANTS & CONSULTANTS

2005 West Broadway, Suite 100, Columbia, MO 65203
OFFICE (573) 442-6171 FAX (573) 777-7800

3220 West Edgewood, Suite E, Jefferson City, MO 65109
OFFICE (573) 635-6196 FAX (573) 644-7240

www.williamskeepers.com

The Board of Trustees
Missouri State Employees' Retirement System

We have audited the accompanying financial statements of the pension trust and internal service funds of the Missouri State Employees' Retirement System (MOSERS), a component unit of the State of Missouri, as of and for the year ended June 30, 2015, and the related notes to the financial statements, which collectively comprise the MOSERS' basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with U.S. generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the pension trust and internal service funds of MOSERS as of June 30, 2015, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in conformity with U.S. generally accepted accounting principles.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the *Management's Discussion and Analysis* on pages 21-25 and the *Schedule of Changes in Employer Net Pension Liability*, *Schedule of Employer Contributions, Schedule of Annual Money-Weighted Rate of Return on Investments,* and the *Notes to the Schedules of Required Supplementary Information* on pages 50-56 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context.

We have applied certain limited procedures to the required supplementary information in accordance with U.S. generally accepted auditing standards, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise MOSERS' basic financial statements. The *Introductory*, *Investment*, *Actuarial* and *Statistical Sections* and the additional information presented on pages 57-64 are presented for purposes of additional analysis and are not a required part of the financial statements.

The additional information presented on pages 57-64 is the responsibility of management and was derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with U.S. generally accepted auditing standards. In our opinion, the additional information presented on pages 57-64 is fairly stated in all material respects in relation to the basic financial statements as a whole.

The *Introductory*, *Investment*, *Actuarial* and *Statistical Sections* have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Williams-Keepers LLC

October 16, 2015

Management Discussion and Analysis

This discussion and analysis of the Missouri State Employees' Retirement System (MOSERS) provides an overview of the retirement system's financial activities for the fiscal year ended June 30, 2015. It is intended to be used in conjunction with the *Transmittal Letter* beginning on page 6 and *Financial Statements* and *Notes*, on pages 26-49 of this report.

Using This Financial Report

This Comprehensive Annual Financial Report (CAFR) reflects the activities of MOSERS as reported in the *Statements of Fiduciary Net Position* and the *Statements of Changes in Fiduciary Net Position*, which begin on page 26. These statements are presented on an accrual basis and reflect all trust fund activities as incurred. The *Notes to Financial Statements* are an integral part of the financial statements and include additional information not readily evident in the statements themselves. The *Required Supplementary Information* (RSI) and *Additional Financial Information* following the *Notes to Financial Statements* provide historical information and additional details considered useful in evaluating the condition of the plan. Investment data in the *Financial Section* is presented at fair value. See the *Actuarial Section* of this report for a detailed discussion of the actuarial value of assets and liabilities and the funded status.

The basic financial statements contained in this section of the CAFR consist of:

- The *Statements of Fiduciary Net Position* which report the pension trust funds' assets, liabilities, and resulting net position where Assets – Liabilities = Net Position held in trust for pension benefits available at the end of the fiscal year. It is a snapshot of the financial position of the pension trust funds at that specific point in time.
- The *Statements of Changes in Fiduciary Net Position* which summarize the pension trust funds' financial transactions that have occurred during the fiscal year where Additions – Deductions = Net Change in Net Position. It supports the change that has occurred to the prior year's net position on the *Statements of Fiduciary Net Position*.
- The *Statements of Net Position* of the internal service funds is similar to the *Statements of Fiduciary Net Position* in that it is also a snapshot of the financial position of the internal service funds where Net Position + Liabilities = Assets.
- The *Statements of Revenues, Expenses, and Changes in Net Position* of the internal service funds is similar to the *Statements of Changes in Fiduciary Net Position* in that it also reports a summary of the financial activity that occurred over the period of the fiscal year where Revenues – Expenses = Net Revenue and supports the change to the prior year's net position.
- The *Statements of Cash Flows* of the internal service funds report the financial transactions of the fiscal year of the internal service funds on a cash basis. It is similar to the *Statements of Revenues, Expenses and Changes in Net Position*; however, the focus of this statement is on the change to cash balances with accrued income and expense items eliminated.
- The *Notes to the Financial Statements* are an integral part of the above financial statements and include additional information not readily evident in the statements themselves.
- The required supplementary *Management Discussion and Analysis* information, the *Required Supplementary Information*, and *Additional Financial Information* following the *Notes to the Financial Statements* provide detailed historical information considered useful in evaluating the condition of the plans administered by MOSERS.
- The MSEP experienced a decrease in its actuarial funded status from 75.1% to 75.0% and the Judicial Plan experienced an increase in its actuarial funded status from 26.9% to 27.8%. The nominal assumed investment return remained unchanged from FY14 at 8% and the assumptions for wage inflation and price inflation were 0% and 2.5%, respectively. In June 2013, the board approved a change to reduce the amortization period from an open 30 years to a closed 30 years beginning July 1, 2014, and will be reduced by one year for each subsequent annual valuation until the period reaches one year. This amortization period will be re-examined in conjunction with the 2030 actuarial valuation to determine if it should be reduced below 15 years or changed to an open 15 years.
- MOSERS uses a smoothing method to determine the actuarial value of assets using the investment gains or losses, relative to what would have been earned at the assumed rate on the actuarial value of assets, and combine that amount with any previously unrecognized investment gains or losses. One-third of that total amount would then be recognized in the current year with two-thirds deferred for future recognition. In no event would the actuarial value of assets as of the valuation date be more than 125% or less than 80% of the fair value of assets.

Financial Reporting Highlights

- MOSERS' net position restricted for pensions decreased by $621.9 million during fiscal year 2015 (FY15). On June 30, 2015, total plan assets (including net capital assets of $3.7 million) were $12.9 billion, exceeding total liabilities of $4.2 billion, resulting in a net position restricted for pensions of $8.6 billion.
- Covered payroll, from which both employee and employer contributions are calculated, increased $15.8 million for MSEP and $6.1 million for Judges, or .83% and 12.24% respectively, over the last fiscal year.
- Total contributions for FY15 were $386.5 million up from $375.1 million in FY14. During FY15, contribution rates were 16.97% for the Missouri State Employees' Plan (MSEP) and 58.45% for the Judicial Plan, which is the rate determined by the June 30, 2013 actuarial valuation. Although not prohibited to increase, future contribution rates shall not be reduced below these rates until the actuarial funding ratio of the MOSERS plans are at least 80%. MOSERS will continue to use a funding policy that follows a financing pattern which computes and requires contribution amounts (when expressed as a percentage of active member payroll) to remain approximately level from year to year and from one generation of citizens to the next generation.
- Investment and securities lending income, net of related fees was $(241.2) million. Investments of the pension trust funds generated a time-weighted (2.64)% return, net of fees, for the year, down from the prior year's return of 19.2%. The money-weighted rate of return, net of investment expenses as defined by GASB 67 was (2.60)% for FY15.
- Investment activity expenses were $124.1 million in FY15 down from $157.8 million in FY14. This decrease is due to less incentive and management fees paid to investment managers, which is related closely to the performance of the funds they manage.
- Benefit payments to members increased by $48.7 million and refunds increased by $1.06 million for FY15.
- Administrative expenses totaled $8.2 million in FY15, compared to $7.4 million in FY14. The increase is primarily due to additional professional services related to the executive director search, additional advertising for vacated positions resulting from retirements and an overall increase in the cost of goods and services in FY15.
- The internal service fund's net position remained relatively stable with assets totaling $5.5 million in FY15 as compared to $5.2 million in FY14.

The following schedules present *Summary Comparative Financial Statements* of the pension trust funds and internal service funds for FY15 and FY14. For each schedule there is a brief summary of the significant changes noted in those schedules.

Pension Trust Funds

Summary Comparative Statements of Fiduciary Net Position

The largest components of the net position of the pension trust funds are the investments, cash and short-term investments, obligations under repo agreements, investment sales and securities lending collateral.

FY15 experienced a decrease in the net fair value of investments (total investments less obligations under repo agreements) of $0.8 billion, from $6.9 billion in FY14 to $6.1 billion in FY15, primarily attributable to unfavorable market conditions as evidenced by a decrease in MOSERS' total investment return, net of fees, from 19.2% last year to (2.64)% this year. Detailed information regarding MOSERS' investment portfolio is included in the *Investment Section* of this report.

Obligations under repo agreements increased from $2.3 billion in FY14 to $4.2 billion in FY15 due to greater exposure financed with reverse repos and less through total return swaps.

Cash and short-term investments decreased due to multiple factors including the performance of the fund, the timing of investment funding and obligations under derivative investments and reverse repo agreements.

Investment sales receivable increased as a result of the timing of investment purchases.

The decrease in securities lending collateral is primarily attributable to a lower utilization rate of lendable assets in the lending portfolio at fiscal year-end. As of fiscal year-end, approximately 0.2% of the collateral received has been invested in asset-backed bonds, down from 2% the prior year. The invested collateral went from $1 million below the liability at the end of last fiscal year to $0.7 million below the liability in FY15.

Pension Trust Funds

Summary Comparative Statements of Fiduciary Net Position

	As of June 30, 2015	As of June 30, 2014	Amount of Change	Percentage Change
Cash and short-term investments	$ 2,237,194,552	$ 2,781,208,806	$ (544,014,254)	(19.56)%
Receivables	373,465,032	92,320,761	281,144,271	304.53
Investments	10,258,761,342	9,208,420,646	1,050,340,696	11.41
Invested securities lending collateral	19,228,051	36,196,014	(16,967,963)	(46.88)
Capital assets	3,701,791	3,754,756	(52,965)	(1.41)
Other assets	26,425	47,564	(21,139)	(44.44)
Total assets	12,892,377,193	12,121,948,547	770,428,646	6.36
Administrative expense payables	1,399,712	1,443,657	(43,945)	(3.04)
Investment purchase payables	1,598,102	456,411,500	(454,813,398)	(99.65)
Securities lending collateral	19,918,342	37,195,140	(17,276,798)	(46.45)
Other liabilities	14,257,651	14,780,144	(522,493)	(3.54)
Obligations under repo agreements	4,203,408,628	2,339,232,799	1,864,175,829	79.69
MOSERS investment portfolio liability (MIP)	4,288,583	3,457,824	830,759	24.03
Total liabilities	4,244,871,018	2,852,521,064	1,392,349,954	48.81
Net positions restricted for pensions	$ 8,647,506,175	$ 9,269,427,483	$ (621,921,308)	(6.71)

Summary Comparative Statements of Changes in Fiduciary Net Position

The increase in contributions received is primarily attributable to an increase in covered payroll from FY14 to FY15.

The decrease in investment income in FY15 from FY14 is attributable to the unfavorable market conditions experienced by the investments of the fund. The decrease in securities lending income is primarily due to less lendable assets in the lending portfolio during the fiscal year. Margins were also lower than the previous fiscal year resulting in lower income generation. The *Investment Section* of this report contains additional information regarding investments and securities lending activity.

The total benefit payments increased as a result of an increase in the number of benefit recipients plus cost-of-living adjustments provided to existing benefit recipients. Detailed schedules of these changes can be viewed on pages 104-109 of the *Actuarial Section* of this report.

Service transfers decreased $0.2 million in FY15 and are dependent on the number of members electing to transfer their service out of MOSERS. Refund of employee contributions are the result of the number of members of the MSEP 2011 tier who have terminated employment and are eligible to request a refund as well as members prior to September 1, 1972 who have contributions remaining in the system. Refunds increased in FY15 by $1.1 million due to a larger number of terminated nonvested MSEP 2011 members choosing to receive a refund.

Pension Trust Funds

Summary Comparative Statements of Changes in Fiduciary Net Position

	Year Ended June 30, 2015	Year Ended June 30, 2014	Amount of Change	Percentage Change
Contributions	$ 386,471,986	$ 375,116,980	$ 11,355,006	3.03%
Investment (loss) income - investing activities	(241,338,203)	1,505,566,826	(1,746,905,029)	(116.03)
Investment income - securities lending activities	116,204	530,974	(414,770)	(78.11)
Miscellaneous income	541,118	456,942	84,176	18.42
Total additions	145,791,105	1,881,671,722	(1,735,880,617)	(92.25)
Benefits	755,239,947	706,504,036	48,735,911	6.90
Service transfers and refunds	4,271,759	3,338,696	933,063	27.95
Administrative expenses	8,200,707	7,442,615	758,092	10.19
Total deductions	767,712,413	717,285,347	50,427,066	7.03
Net (decrease) increase	(621,921,308)	1,164,386,375	(1,786,307,683)	(153.41)
Net position beginning of year	9,269,427,483	8,105,041,108	1,164,386,375	14.37
Net positions held in trust for pension benefits	$ 8,647,506,175	$9,269,427,483	$ (621,921,308)	(6.71)

Internal Service Funds

Summary Comparative Statements of Net Position Analysis

The decrease in premiums receivable is attributable to normal fluctuations in the month-end balance of life and long-term disability insurance premiums receivable during the year, which are dependent on the number of members participating and amount of their coverage.

The increase in investments is attributable to normal fluctuations in the investment in overnight repurchase agreements of the funds held pending transmission to the life and long-term disability insurance company. These funds are also included in overnight repurchase agreements.

The increase in premiums payable is attributable to normal fluctuations in the month-end balances of premiums payable for the year, similar to the fluctuations of the premiums receivable.

Other liabilities increased primarily as a result of the timing of reimbursements due to the pension trust funds for the internal service fund's portion of shared expenses which had not been transferred at year end.

Summary Comparative Statements of Revenues, Expenses, and Changes in Net Position Analysis

Premium receipts and premium disbursements increased slightly due to normal fluctuations in the amount of optional life insurance coverage selected by state employees. These amounts are collected when employee wages are paid and remitted to The Standard insurance company on a monthly basis.

The decrease in deferred compensation receipts and disbursements is attributable to a $1,000,000 reimbursement paid in FY14 to cover administrative expenses to the internal service fund at MOSERS from the State of Missouri Deferred Compensation Plan's third-party record keeper which collects deferred compensation contributions directly from employers. As of June 30, 2015, there were 62,041 participants (both active and terminated/retired), which is an increase of 3,259 from FY14. The state of Missouri has not contributed an employer match since March 2010.

Administrative expenses increased primarily as a result of the increase in building use charge, postage and business continuity expenses allocated to Life and LTD *Internal Service Funds*, and an increase in personnel services as a result of adding communications staff directly related to the Deferred Compensation *Internal Service Funds*.

Summary Comparative Statements of Cash Flows Analysis

The decrease in cash flows from operating activities is primarily attributable to a decrease in cash payments received from employers and members over that of FY14 of $(760,633) and increased payments of $35,564 for refunds to members and payments to suppliers for goods and services.

The increase in cash flows from noncapital financing activities is primarily attributable to an increase in the amount of life and long-term disability premium refund checks that remained outstanding at year end.

The increase in cash flows from investing activities is attributable to several factors including the decrease in outflows for net purchase and maturities of overnight repurchase agreements of $710,971, the increase in cash received from investment income of $663 and included the $7,377 decrease in capital asset purchases for the deferred compensation plan.

Request for Information

This financial report is designed to provide a general overview of the system's finances for all those interested in the system. Questions concerning any of the information provided in this report or request for additional information should be addressed to MOSERS at P.O. Box 209, Jefferson City, MO 65102 or by email at *mosers@mosers.org*.

Internal Service Funds

Summary Comparative Statements of Net Position

	As of June 30, 2015	As of June 30, 2014	Amount of Change	Percentage Change
Premiums receivable	$ 978,693	$ 986,177	$ (7,484)	(0.76)%
Investments	4,482,083	4,225,655	256,428	6.07
Fixed assets net of accumulated depreciation	4,437	6,125	(1,688)	(27.56)
Leasehold improvements	2,910	3,880	(970)	(25.00)
Total assets	5,468,123	5,221,837	246,286	4.72
Premiums payable	4,394,941	3,910,384	484,557	12.39
Other liabilities	327,876	97,990	229,886	234.60
Total liabilities	4,722,817	4,008,374	714,443	17.82
Unrestricted net position	745,306	1,213,463	(468,157)	(38.58)
Total liabilities and net position	$ 5,468,123	$ 5,221,837	$ 246,286	4.72

Internal Service Funds

Summary Comparative Statements of Revenues, Expenses, and Changes in Net Position

	Year Ended June 30, 2015	Year Ended June 30, 2014	Amount of Change	Percentage Change
Premium receipts	$30,177,918	$29,563,054	$ 614,864	2.08%
Deferred compensation receipts	0	1,000,000	(1,000,000)	(100.00)
Miscellaneous income	480,120	480,120	0	0.00
Total operating revenue	30,658,038	31,043,174	(385,136)	(1.24)
Premium disbursements	30,157,271	29,544,110	613,161	2.08
Premium refunds	20,646	18,942	1,704	9.00
Administrative expenses	960,827	755,945	204,882	27.10
Total operating expenses	31,138,744	30,318,997	819,747	2.70
Net operating (loss) income	(480,706)	724,177	(1,204,883)	(166.38)
Investment income	12,549	11,886	663	5.58
Net revenues over expenses	(468,157)	736,063	(1,204,220)	(163.60)
Net position beginning of year	1,213,463	477,400	736,063	154.18
Net position end of year	$ 745,306	$ 1,213,463	$ (468,157)	(38.58)

Internal Service Funds

Summary Comparative Statements of Cash Flows

	Year Ended June 30, 2015	Year Ended June 30, 2014	Amount of Change	Percentage Change
Cash flows from operating activities	$ 244,691	$ 969,760	$ (725,069)	(74.77)%
Cash flows (used by) noncapital financing activities	(812)	(6,870)	6,058	88.18
Cash flows (used by) investing activities	(243,879)	(962,890)	719,011	74.67
Net change in cash	0	0	0	
Cash balances beginning of year	0	0	0	
Cash balances end of year	$ 0	$ 0	$ 0	

Pension Trust Funds

Statements of Fiduciary Net Position | As of June 30, 2015

	MSEP	Judicial Plan	Total
Assets			
Cash and short-term investments	$ 2,203,635,349	$ 33,559,203	$ 2,237,194,552
Receivables			
State contributions	14,337,710	1,369,318	15,707,028
Investment sales	346,268,045	5,273,322	351,541,367
Investment income receivable	5,809,687	88,476	5,898,163
Other	313,697	4,777	318,474
Total receivables	366,729,139	6,735,893	373,465,032
Investments at fair value			
U.S. treasury securities	4,048,255,679	61,650,960	4,109,906,639
Corporate bonds	834,721	12,712	847,433
Government bonds & gov't mortgage-backed securities	42,356,541	645,049	43,001,590
Common stock	409,018,744	6,228,954	415,247,698
Limited partnerships	4,755,051,195	72,414,762	4,827,465,957
Bank loans	97	1	98
Real estate investment trust	9,905	151	10,056
Foreign currency	(2,647)	(40)	(2,687)
International equities	845,444,364	12,875,288	858,319,652
U.S. dollar-denominated international corporate bonds	3,905,430	59,476	3,964,906
Total investments	10,104,874,029	153,887,313	10,258,761,342
Invested securities lending collateral	18,939,619	288,432	19,228,051
Capital assets			
Land	263,277	4,009	267,286
Building and building improvements	4,592,927	69,946	4,662,873
Furniture, fixtures, and equipment	1,328,882	20,238	1,349,120
Software	273,102	4,159	277,261
Total capital assets	6,458,188	98,352	6,556,540
Accumulated depreciation	(2,811,926)	(42,823)	(2,854,749)
Net capital assets	3,646,262	55,529	3,701,791
Prepaid expenses and other	26,029	396	26,425
Total assets	12,697,850,427	194,526,766	12,892,377,193
Liabilities			
Administrative expense payable	1,378,716	20,996	1,399,712
Investment purchases payable	1,574,130	23,972	1,598,102
Securities lending collateral	19,619,555	298,787	19,918,342
Investment incentive fees payable	12,760,186	194,325	12,954,511
Employee vacation and overtime liability	1,283,592	19,548	1,303,140
Obligations under repo agreements	4,140,355,084	63,053,544	4,203,408,628
MOSERS investment portfolio liability (MIP)	4,224,252	64,331	4,288,583
Total liabilities	4,181,195,515	63,675,503	4,244,871,018
Net position			
Net position, investment in capital assets	3,646,262	55,529	3,701,791
Restricted for pension benefits	8,513,008,650	130,795,734	8,643,804,384
Net positions held in trust for pension benefits	$ 8,516,654,912	$130,851,263	$ 8,647,506,175

See accompanying *Notes to the Financial Statements*.

BASIC FINANCIAL STATEMENTS

Pension Trust Funds

Statements of Changes in Fiduciary Net Position | For Year Ended June 30, 2015

	MSEP	Judicial Plan	Total
Additions			
Contributions			
State contributions	$ 329,752,832	$ 32,696,686	$ 362,449,518
Employee contributions	18,099,455	488,193	18,587,648
Member purchases of service credit	1,859,005	0	1,859,005
Service transfer contributions	3,575,815	0	3,575,815
Total contributions	353,287,107	33,184,879	386,471,986
Investment income			
From investing activities			
Investing activity income:			
Net appreciation in fair value of investments	340,000,198	5,177,869	345,178,067
Interest	23,446,164	357,062	23,803,226
Dividends	4,178,590	63,636	4,242,226
Swap (loss)	(520,964,483)	(7,933,778)	(528,898,261)
Other	37,874,646	576,794	38,451,440
Net investing activity (loss)	(115,464,885)	(1,758,417)	(117,223,302)
Investing activity expenses:			
Management fees	(116,252,349)	(1,770,409)	(118,022,758)
Custody fees	(344,128)	(5,241)	(349,369)
Consultant fees	(923,508)	(14,064)	(937,572)
Performance measurement fees	(458,855)	(6,988)	(465,843)
Internal investment activity expenses	(4,274,266)	(65,093)	(4,339,359)
Total investing activity expenses	(122,253,106)	(1,861,795)	(124,114,901)
Net(loss) from investing activities	(237,717,991)	(3,620,212)	(241,338,203)
From securities lending activities			
Securities lending income	46,891	714	47,605
Securities lending expenses:			
Borrower rebates	217,094	3,306	220,400
Management fees	(149,524)	(2,277)	(151,801)
Total securities lending activities expenses	67,570	1,029	68,599
Net income from securities lending activities	114,461	1,743	116,204
Total net investment (loss)	(237,603,530)	(3,618,469)	(241,221,999)
Miscellaneous income	533,001	8,117	541,118
Total additions	116,216,578	29,574,527	145,791,105
Deductions			
Benefits	639,554,106	31,245,906	670,800,012
BackDROP & lump sum benefits	84,439,935	0	84,439,935
Service transfer payments	1,792,495	0	1,792,495
Contribution refunds	2,479,264	0	2,479,264
Administrative expenses	8,077,692	123,015	8,200,707
Total deductions	736,343,492	31,368,921	767,712,413
Net (decrease) in net position	(620,126,914)	(1,794,394)	(621,921,308)
Net positions held in trust for pension benefits			
Beginning of year	9,136,781,826	132,645,657	9,269,427,483
End of year	$8,516,654,912	$130,851,263	$8,647,506,175

See accompanying *Notes to the Financial Statements*.

Internal Service Funds

Statements of Net Position | As of June 30, 2015

	Life & LTD	Deferred Compensation	Total
Assets			
Premiums receivable	$ 978,693	$ 0	$ 978,693
Due to (due from)	251,618	(251,618)	0
Investments at fair value	3,482,083	1,000,000	4,482,083
Capital assets	0	11,269	11,269
Accumulated depreciation - capital assets	0	(6,832)	(6,832)
Leasehold improvements	0	3,880	3,880
Accumulated depreciation - leasehold	0	(970)	(970)
Total assets	$4,712,394	$ 755,729	$5,468,123
Liabilities and net position			
Liabilities			
Premiums payable	$4,394,941	$ 0	$4,394,941
Checks outstanding net of deposits	529	0	529
Other	327,347	0	327,347
Total liabilities	4,722,817	0	4,722,817
Unrestricted net position (deficit)	(10,423)	755,729	745,306
Total liabilities and net position	$4,712,394	$ 755,729	$5,468,123

See accompanying *Notes to the Financial Statements*.

Internal Service Funds

Statements of Revenues, Expenses, and Changes in Net Position | For Year Ended June 30, 2015

	Life & LTD	Deferred Compensation	Total
Operating revenues			
Premium receipts	$30,177,918	$ 0	$30,177,918
Deferred compensation (reimbursement) receipt	(1,000,000)	1,000,000	0
Miscellaneous income	480,120	0	480,120
Total operating revenues	29,658,038	1,000,000	30,658,038
Operating expenses			
Premium disbursements	30,157,271	0	30,157,271
Premium refunds	20,646	0	20,646
Administrative expenses	516,782	444,045	960,827
Total operating expenses	30,694,699	444,045	31,138,744
Operating revenues (under)over operating expenses	(1,036,661)	555,955	(480,706)
Nonoperating revenues			
Investment income	9,749	2,800	12,549
Net revenues (under) over expenses	(1,026,912)	558,755	(468,157)
Net position on July 1, 2014	1,016,489	196,974	1,213,463
Net position (deficit) June 30, 2015	$ (10,423)	$ 755,729	$ 745,306

See accompanying *Notes to the Financial Statements*.

BASIC FINANCIAL STATEMENTS

Internal Service Funds

Statements of Cash Flows | Year Ended June 30, 2015

	Life & LTD	Deferred Compensation	Total
Cash flows from operating activities			
Cash received from employer and members	$ 30,665,526	$ 0	$ 30,665,526
Payments to outside carriers	(29,670,803)	0	(29,670,803)
Refunds of premiums to members	(20,646)	0	(20,646)
Cash payments to employees for services	(203,038)	(217,965)	(421,003)
Cash payments to other suppliers of goods and services	(523,548)	215,165	(308,383)
Net cash provided (used) by operating activities	247,491	(2,800)	244,691
Cash flows from noncapital financing activities			
Implicit funding of checks outstanding net of deposits	529	0	529
Implicit repayment of prior years checks outstanding net of deposits	(1,341)	0	(1,341)
Net cash (used) by noncapital financing activities	(812)	0	(812)
Cash flows from investing activities			
Purchase of investment securities	(1,140,932,809)	(12,000,000)	(1,152,932,809)
Proceeds from sale and maturities of investment securities	1,140,676,381	12,000,000	1,152,676,381
Cash received from investment income	9,749	2,800	12,549
Net cash provided (used) by investing activities	(246,679)	2,800	(243,879)
Net increase (decrease) in cash	0	0	0
Cash balances June 30, 2014	0	0	0
Cash balances June 30, 2015	$ 0	$ 0	$ 0
Reconciliation of operating revenues under operating expenses to net cash provided by operating activities			
Operating revenues over (under) operating expenses	$ (1,036,661)	$ 555,955	$ (480,706)
Adjustments to reconcile operating revenues over (under) operating expenses to net cash provided (used) by operating activities			
Depreciation expense	0	2,658	2,658
Change in assets and liabilities:			
Increase (decrease) in operational accounts receivable	204,462	(196,974)	7,488
Increase (decrease) in operational accounts payable	1,079,690	(364,439)	715,251
Total adjustments	1,284,152	(558,755)	725,397
Net cash provided (used) by operating activities	$ 247,491	$ (2,800)	$ 244,691

See accompanying *Notes to the Financial Statements*.

Notes to the Financial Statements | Year Ended June 30, 2015

(1) Plan Descriptions and Contribution Information

Missouri State Employees' Plan (MSEP)

The MSEP is a multiple-employer, defined benefit public employee retirement plan with two benefit structures known as the MSEP (closed plan) and MSEP 2000, which are administered by the Missouri State Employees' Retirement System (MOSERS) in accordance with Sections 104.010 and 104.312 to 104.1215 of the Revised Statutes of Missouri (RSMo). As established under Section 104.320, RSMo, MOSERS is a body corporate and an instrumentality of the state. In the system are vested the powers and duties specified in Sections 104.010 and 104.312 to 104.1215, RSMo and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes of Sections 104.010 and 104.312 to 104.1215, RSMo.

Responsibility for the operation and administration of the system is vested in the 11-member MOSERS Board of Trustees as defined by state law. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the MSEP is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

The board intends to follow a financing pattern which computes and requires contribution amounts which, expressed as a percent of active member payroll, will remain approximately level from year-to-year and from one generation of citizens to the next generation. For the year ended June 30, 2015, the employer contribution rate was 16.97% of covered payroll.

Complete recognition of the year-to-year swings in the fair market value of system assets would produce contribution rate changes that would run counter to the "approximately level" goal. A common actuarial practice referred to as asset smoothing is used to address that issue. As a result of smoothing, investment gains or losses, relative to what would have been earned at the assumed rate on the actuarial value of assets are added to any previously unrecognized gains or losses and one-third of that total amount was recognized beginning in FY15, with two-thirds deferred for future recognition. In no event may the actuarial value of assets as of the valuation date be more than 125% or less than 80% of the fair market value of assets on that date.

For the actuarial valuation, the nominal investment return assumption is 8% and wage inflation and price inflation are 0% and 2.5%, respectively. See the *Actuarial Section* for all actuarial assumptions used.

At any point in time, the ratio of actuarial to fair value of assets will be more or less than the fair value but, if the smoothing method is prudent and properly constructed, those values will converge over time. As of June 30, 2015, and 2014, the ratio of actuarial to fair value of assets was 103% and 95%, respectively for the MSEP.

Generally, all full-time state employees hired before July 2000, who were not covered under another state-sponsored retirement plan, are eligible for membership in the MSEP (closed plan). Full-time state employees hired after July 2000, and before January 2011, are eligible for membership in the MSEP 2000. Employees hired for the first time on or after January 2011 are eligible for membership in the MSEP 2011 tier of the MSEP 2000. MOSERS participates as an employer in the MSEP and MSEP 2000. The MSEP provides retirement, survivor, and disability benefits.

As of the June 30, 2015 valuation, membership* in the MSEP consisted of the following:

Retirees and beneficiaries currently receiving benefits		42,964
Terminated employees entitled to, but not yet receiving benefits		19,290
Active		
Vested	33,170	
Nonvested	16,810	49,980
Total membership		112,234

* *Excludes 195 members on leave of absence and 948 members on long-term disability.*

MSEP (closed plan)

General state employees are fully vested for benefits upon receiving 5 years of credited service. Under the MSEP (closed plan), general employees may retire with full benefits upon the earliest of attaining:

- Age 65 with 5 years of service;
- Age 60 with 15 years of service; or
- Age 48 with age and service equaling 80 or more - "Rule of 80."

General employees may retire early at age 55 with at least 10 years of service with reduced benefits. The base benefit in the general employee plan is equal to 1.6% multiplied by the final average pay multiplied by years of credited service.

For members hired prior to August 28, 1997, cost-of-living adjustments (COLAs) are provided annually based on 80% of the percentage increase in the average consumer price index (CPI) from one year to the next, with a minimum rate of 4% and maximum rate of 5% until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the percentage increase in the average CPI from one year to the next, up to a maximum rate of 5%.

Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. A member must have terminated with at least 5, but less than 10 years of service, be less than age 60 and with a benefit present value of less than $10,000.

Contributions are determined through annual actuarial valuations. Contributions for FY15 were 16.97% of covered payroll, which is the rate set as a minimum policy employer contribution determined by the June 30, 2013, actuarial valuation until the actuarial funding ratio of the MOSERS plan is at least 80%. Contributions beginning July 2015 will continue at the policy minimum of 16.97%. Administration of the MSEP is financed through contributions to this plan from the state of Missouri and its component employers and investment earnings.

MSEP 2000

General state employees are fully vested for benefits upon receiving 5 years of credited service. Under the MSEP 2000, general employees may retire with full benefits upon the earliest of attaining:

- Age 62 with 5 years of service; or
- Age 48 with age and service equaling 80 or more - "Rule of 80."

General employees may retire early at age 57 with at least 5 years of service with reduced benefits. The base benefit in the general employee plan is equal to 1.7% multiplied by final average pay multiplied by years of credited service.

For those retiring under "Rule of 80," an additional temporary benefit equivalent to 0.8% multiplied by final average pay multiplied by years of credited service is payable until age 62.

COLAs are provided annually based on 80% of the percentage increase in the average CPI from one year to the next, up to a maximum rate of 5%.

Contributions are determined through annual actuarial valuations. Contributions for FY15 were 16.97% of covered payroll, which is the rate set as a minimum policy employer contribution determined by the June 30, 2013, actuarial valuation until the actuarial funding ratio of the MOSERS plan is at least 80%. Contributions beginning July 2015 will continue at the policy minimum of 16.97%. Administration of the MSEP 2000 is financed through contributions to this plan from the state of Missouri and investment earnings.

The state of Missouri is required to make all contributions to the MSEP. Prior to September 1, 1972, contributions by members were required. Accumulated employee contributions made prior to that time, plus interest through August 28, 1997, are refundable to the member or designated beneficiaries upon request.

MSEP 2011

On July 19, 2010, an additional tier of the MSEP 2000 defined benefit plan was signed into law for members of MOSERS. This tier (MSEP 2011) includes all new employees first hired on or after January 1, 2011.

Under the MSEP 2011, general employees may retire with full benefits upon the earliest of attaining:

- Age 67 with 10 years of service; or
- Age 55 with age and service equaling 90 or more - "Rule of 90."

General employees may retire early at age 62 with at least 10 years of service with reduced benefits. The base benefit in the general employee plan is equal to 1.7% multiplied by final average pay multiplied by years of credited service.

For those retiring under "Rule of 90," an additional temporary benefit equivalent to 0.8% multiplied by final average pay multiplied by years of credited service is payable until age 62.

COLAs are provided annually based on 80% of the percentage increase in the average CPI from one year to the next, up to a maximum rate of 5%.

Member contributions are 4% of pay. Employer contributions are determined through annual actuarial valuations. Contributions for FY15 were 16.97% of covered payroll, which is the rate set as a minimum policy employer contribution determined by the June 30, 2013, actuarial valuation until the actuarial funding ratio of the MSEP is at least 80%. Contributions beginning July 2015 will continue at the policy minimum of 16.97%. Administration of the MSEP 2011 is financed through contributions to this plan from the member, state of Missouri and its component employers, and investment earnings.

The MSEP 2011 does not impact employees employed by the state prior to January 1, 2011.

For a detailed summary of benefits for general employees, legislators, and elected officials under the MSEP, MSEP 2000, and MSEP 2011 tier, refer to the *Summary of Plan Provision*s in the *Actuarial Section* of this report.

Judicial Plan

The Judicial Plan is a single-employer, public employee retirement plan administered in accordance with Sections 476.445 to 476.690, RSMo. Responsibility for the operation and administration of the Judicial Plan is vested in the MOSERS Board of Trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Judicial Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Judges and commissioners of the supreme court or the court of appeals, judges of the circuit court, probate court, magistrate court, court of common pleas, court of criminal corrections, justices of the peace, commissioners or deputy commissioners of the circuit court appointed after February 29, 1972, commissioners of the juvenile division of the circuit court appointed pursuant to Section 211.023, RSMo, commissioners of the drug court pursuant to Section 478.466, RSMo, or commissioners of the family court are eligible for membership in the Judicial Plan. The Judicial Plan provides retirement, survivor, and disability benefits. Members are immediately eligible for benefits.

As of the June 30, 2015 valuation, membership* in the Judicial Plan consisted of the following:		
Retirees and beneficiaries currently receiving benefits		539
Terminated employees entitled to, but not yet receiving benefits		29
Active		
Vested	405	
Nonvested	0	405
Total membership		973

* *Excludes 1 member on long-term disability.*

Under the Judicial Plan, members may retire with full benefits upon the earliest of attaining:

- Age 62 with 12 years of service;
- Age 60 with 15 years of service; or
- Age 55 with 20 years of service.

Employees may retire early at age 62 with less than 12 years of service or age 60 with less than 15 years of service with a reduced benefit that is based upon years of service relative to 12 or 15 years.

In the Judicial Plan, the base benefit for members with 12 or more years of service is equivalent to 50% of compensation on the highest court served.

For members hired prior to August 28, 1997, COLAs are provided annually based on 80% of the percentage increase in the average CPI from one year to the next, with a minimum rate of 4% and a maximum rate of 5% until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the percentage increase in the average CPI from one year to the next, up to a maximum rate of 5%.

Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. A member must have terminated with at least 5, but less than 10 years of service, be less than age 60, with a benefit present value of less than $10,000.

Funding of the Judicial Plan on an actuarial basis began on July 1, 1998. Contributions are determined through annual actuarial valuations. Contributions for FY15 were 58.45% of covered payroll, which is the rate set as a minimum policy employer contribution determined by the June 30, 2013, actuarial valuation until the actuarial funding ratio of the Judicial Plan is at least 80%. Contributions beginning July 2015 will continue at the policy minimum of 58.45%. The state of Missouri is required to make all contributions to the Judicial Plan. Administration of the Judicial Plan is financed through contributions to this plan from the state of Missouri and investment earnings.

Judicial 2011 Tier

On July 19, 2010, an additional tier of the MSEP 2000 defined benefit plan was signed into law for members of the Judicial Plan. This tier (Judicial Plan 2011) includes all new judicial members first serving on or after January 1, 2011.

Under the Judicial Plan 2011, members may retire with full benefits upon the earliest of attaining:

- Age 67 with 12 years of service; or
- Age 62 with 20 years of service; or

Judicial members may retire early at age 67 with less than 12 years of service with reduced benefits, or age 62 with less than 20 years of service with a reduced benefit based on years of service.

For the actuarial valuation of the Judicial Plan, the nominal investment return assumption is 8% and wage inflation and price inflation are 3% and 2.5%, respectively. See the *Actuarial Section* for all actuarial assumptions used.

For a more detailed summary of benefits for members of the Judicial Plan, refer to the *Summary of Plan Provisions* in the *Actuarial Section* of this report.

Missouri State Insured Defined Benefit Insurance Plan

The Missouri State Insured Defined Benefit Insurance Plan is accounted for as an internal service fund of the state of Missouri and is administered through The Standard, which is a third-party administrator with oversight by MOSERS. It provides basic life insurance in an amount equal to one times annual salary while actively employed (with a $15,000 minimum) to eligible members of the MSEP, MSEP 2000 (except employees of the Missouri Department of Conservation and certain state colleges and universities), MSEP 2011, Judicial Plan, and certain members of the Public School Retirement System.

The plan also provides duty-related death benefits, optional life insurance for active employees and retirees who are eligible for basic coverage, and a long-term disability plan for certain eligible members. For a more detailed description of insurance benefits, refer to page 121-122 in the *Actuarial Section* of this report.

Due to the nature of MOSERS' reliance on funding from the state of Missouri and its component employers, and the overall control of the plan document by the legislative and executive branches of state government, the Missouri State Insured Defined Benefit Insurance Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as an internal service fund. Administration of the Missouri State Insured Defined Benefit Insurance Plan is financed through contributions from the state of Missouri and its component employers.

State of Missouri Deferred Compensation Plan

The State of Missouri Deferred Compensation Plan is accounted for as an internal service fund. MOSERS uses ICMA-RC as an external provider for record keeping.

Record keeping of individual accounts and management of investment options are paid from charges to the participants and investment option reimbursement arrangements. Participants in the plan manage individual accounts by choosing investment options from the available fund lineup. MOSERS' role is to oversee the plan, choose external providers and investment options, and develop communication to plan participants. The State of Missouri Deferred Compensation Plan receives reimbursements from the plan's investment option managers which are used to cover plan administration costs and a portion of participant fees. In FY15, a total of $2,751,412 was collected by ICMA-RC from a combination of $2,023,437 in investment option reimbursements and $727,975 in participant fees.

Effective July 1, 2012, new permanent full-time and part-time employees are automatically enrolled at 1% of pay into the State of Missouri Deferred Compensation Plan.

The State of Missouri Deferred Compensation Plan offers participants the ability to purchase units of MOSERS' investments as an investment option. Participants who choose this investment option own units of MOSERS investments, but not specific assets. As of June 30, 2015, participants invested $4,288,583 in the MOSERS Investment Portfolio (MIP) fund.

Audited financial statements for the State of Missouri Deferred Compensation Plan can be viewed at *www.mosers.org*.

(2) Summary of Significant Accounting Policies and Plan Asset Matters

Basis of Accounting

The financial statements of the MSEP, the Judicial Plan, the Missouri State Insured Defined Benefit Insurance Plan and the State of Missouri Deferred Compensation Plan were prepared using the accrual basis of accounting. The accompanying financial statements are prepared in accordance with accounting principles generally accepted in the U.S. that apply to governmental accounting for fiduciary funds.

Contributions are recognized as revenues when due, pursuant to statutory requirements. Benefits and refunds are recognized when due and payable and expenses are recorded when the corresponding liabilities are incurred regardless of when contributions are received or payment is made. The direct method of reporting cash flows is used.

Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the U.S. requires management to make estimates and assumptions that affect the accompanying financial statements and disclosures. Actual results could differ from those estimates.

Method Used to Value Investments

Section 104.440, RSMo allows the board of trustees to invest the trust fund assets in accordance with the prudent person rule. Investments of the pension trust funds and the internal service funds are reported on the basis of fair value. MOSERS unitizes investments for the purpose of allowing participants in the State of Missouri Deferred Compensation Plan the option to invest in the MOSERS investment portfolio (MIP). For financial reporting purposes, investments throughout this CAFR are reported in whole and include .04% or $4,288,583 of the units invested in the MIP by Deferred Compensation participants. The schedule on page 45 provides a summary of the fair values of the investments as reported on the *Statements of Fiduciary Net Position* of the pension trust funds and *Statements of Net Position* of the internal service funds.

Fair values for the equity real estate investments are based on appraisals. Fair values of the limited partnership investments are based on valuations of the underlying companies of the limited partnerships as reported by the general partner. Certain limited partnerships reflect values and related performance on a quarter lag basis due to the nature of those investments and the time it takes to value them. Fair value of the commingled funds is determined based on the underlying asset values. The remaining assets are primarily valued by the system's master custodian, BNY Mellon, using the last trade price information supplied by various pricing data vendors.

(3) Cash and Investments

Cash

Custodial credit risk for cash deposits and investments is the risk that, in the event of a bank failure, the system and plan deposits may not be returned to them. The board adopted the following policy on June 18, 2009:

The executive director shall require that banks managing demand deposit accounts for any retirement plan associated with MOSERS (MOSERS' defined benefit plan and the deferred compensation plan/state incentive compensation plan) to hold, at minimum, collateral security in either MOSERS' name or the State of Missouri Deferred Compensation Plan and in an amount equal to, or more than, the amount on deposit that exceeds the Federal Deposit Insurance Corporation (FDIC) insured amount. The types of collateral security shall be included on a list maintained by the State Treasurer's office in accordance with Section 30.270 RSMo, but in no case may a bank pledge collateral that does not specifically allow MOSERS to release the collateral or pledge collateral that represents securities of the pledging banks.

Cash balances represent both demand deposit accounts held at the bank and investment cash on deposit with the investment custodian. To maximize investment income, the float caused by outstanding checks is invested in an internally managed short-term investment account, thus causing a possible negative book balance. Negative book balances are reflected in the liabilities' section of the *Statements of Net Position* of the internal service funds and included in the cash and short-term investments on the *Statements of Fiduciary Net Position* of the pension trust funds.

The table below is a schedule of the aggregate book and bank balances of all cash accounts.

Aggregate Book and Bank Balances

	Cash Balances	
	Book	**Bank/Investment Custodian**
Pension trust funds - investment custodian	$ (105)	$ (105)
Pension trust funds - demand deposits	(12,290,241)	41,128
Internal service fund - insurance plan demand deposits	(529)	33

Under the repurchase agreement, the bank does not have the right to substitute other appropriate securities. Central Trust Bank pledged the following securities to MOSERS on June 30, 2015, as collateral for overnight repurchase agreements:

Collateral for Overnight Repurchase Agreements

	Maturity	**Fair Value**
$15,000,000 Federal Home Loan Mortgage Corp.	09/15/2017	$15,000,450
$7,000,000 Federal Home Loan Bank	10/27/2017	7,023,800

Investments

Investment Policy

In 2013, MOSERS began transitioning to a portfolio that shifts from a return-driven process towards a risk-driven process using an allocation approach that focuses on fundamental economic factors such as growth and inflation as well as other factors with expected return values such as credit, carry, and illiquidity.

MOSERS' policy with respect to the allocation of invested assets is established and may be amended by the board of trustees majority vote. The board's guiding principles with respect to the investment of MOSERS' assets are to preserve the long-term corpus of the fund, maximize total return within prudent risk parameters, and act in the exclusive interest of the members of the system. The board has developed a risk-weighted policy allocation that is designed to achieve the long term required return objectives of the system, given certain risk constraints. The current asset allocation reflects a diversified portfolio, which will perform well in a variety of economic conditions and will help reduce the portfolio's overall volatility.

The board has authorized staff to create and maintain an internally managed beta-balanced portfolio that utilizes a modest amount of leverage in order to balance the risk allocations equally across the five asset classes contained in that portfolio. The leverage is limited to 1.25 times of beta-balanced capital. The limit may also be stated as 225% of beta-balanced capital. The table below illustrates the fair value, market exposure, and policy exposure of the internally managed beta-balanced portfolio by asset class as of June 30, 2015.

Schedule of Internally Managed Leverage

Internal beta-balanced portfolio	Fair Value of Internally Managed Beta-Balanced Capital	Percent of Investments at Fair Value	Market Exposure	Percent of Investments at Market Exposure*	Policy Exposure Beta-Balanced
Beta-balanced equities	$1,104,694,277	19.2%	$ 1,427,787,984	24.8%	24%
Beta-balanced nominal bonds	562,285,365	9.8	2,615,294,169	45.4	46
Beta-balanced commodities	337,582,348	5.9	1,433,011,833	24.9	21
Beta-balanced inflation-indexed bonds	1,216,502,368	21.1	4,608,765,818	80.1	80
Beta-balanced alternative beta	2,534,151,349	44.0	2,424,668,938	42.1	39
Total internal beta-balanced portfolio	$5,755,215,707	100.0%	$12,509,528,742	217.3%	210%

* *The actual amount of leverage in the internally managed beta-balance porfolio was 1.17 and 1.06 times beta-balanced capital or 217% and 206% as of June 30, 2015, and 2014, respectively.*

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate rates of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return for each major asset class included in MOSERS' target asset allocation as of June 30, 2015, are summarized in the table below.

Target Asset Allocation

	Policy Allocation	Long-Term Expected Real Rate of Return*	Weighted Average Long-Term Expected Real Rate of Return
Beta-balanced portfolio	80.0%	5.7%	4.6%
Illiquids portfolio**	20.0	7.3	1.5
	100.0%		6.1%

* *Represents best estimates of geometric rates of return for each major asset class included.*

** *Illiquid portfolio upper limit of 27.5% of capital, no new commitments past 23%.*

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of an investment in a single-issuer. Issuer concentration limits are established in individual portfolio guidelines that generally do not allow a single issuer to be greater than 5% of the portfolio's market value. As of fiscal year end, there is no single issuer exposure, exclusive of investments issued or explicitly guaranteed by the U.S. government, within MOSERS' portfolio that comprises 5% or more of the overall portfolio or MOSERS' fiduciary net position. Therefore, there is no concentration of credit risk to report.

Money-Weighted Rate of Return

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was (2.60)% for the year ended June 30, 2015. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for changing amounts actually invested.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to MOSERS. As of June 30, 2015, MOSERS' fixed income assets that are not government guaranteed represented 30.8% of the fixed income securities. In preparing this report, credit risk associated with all fixed income holdings including collateral for repurchase agreements and securities lending collateral has been included. The tables below summarize MOSERS' fixed income security exposure levels and credit qualities.

Average Credit Quality and Exposure Levels of Nongovernment Guaranteed Securities

Fixed Income Security Type	Fair Value June 30, 2015	Percent of all Fixed Income Assets	Weighted Average Credit Quality	Ratings Dispersion Requiring Further Disclosure
Collateralized mortgage obligations	$ 1,004,420	0.0%	AA	See below
Implicit U.S. government agencies	607,964,107	9.5	AA	See below
Non-U.S. sovereign	47,662,622	0.7	BBB	See below
Asset-backed securities	2,108,766	0.0	AAA	See below
Corporate bonds	46,712,411	0.7	AA	See below
Bank loans	183,457	0.0	Not rated	See below
Bank deposits	550,091,667	8.6	FDIC insured	None
Repurchase agreements	467,930,531	7.3	Not rated	None
Pooled investments	256,670,756	4.0	AAA	None
Total nongov't guaranteed securities	$1,980,328,737	30.8%		
Total fixed income securities	$6,427,944,824			

Ratings Dispersion Detail - Fair Value

Credit Rating Level	Collateralized Mortgage Obligations	Non-U.S. Sovereign	Asset-Backed Securities	Corporate Bonds	Implicit U.S. Agencies	Bank Loans
AAA		$ 708,580	$2,071,078			
AA	$1,004,420			$45,886,817	$607,964,107	
A		14,495,765		179,301		
BBB		28,064,657		646,293		
BB		4,037,153				
CCC		356,467				
Not rated			37,688			$183,457
	$1,004,420	$47,662,622	$2,108,766	$46,712,411	$607,964,107	$183,457

As a matter of practice, there are no overarching limitations for credit risk exposures within the overall fixed income portfolio. Each individual portfolio within fixed income is managed in accordance with operational guidelines that are specific as to permissible credit quality ranges, exposure levels within individual quality tiers, and average credit quality.

Credit risk for derivative instruments held by the system results from counterparty risk assumed by MOSERS. This is essentially the risk that the counterparty to a MOSERS transaction will be unable to meet its obligation. Information regarding MOSERS' credit risk related to derivatives can be viewed in the derivatives disclosures on page 41 of these notes.

Policies related to credit risk pertaining to MOSERS' securities lending program are found under the securities lending disclosures found on page 42 of these notes.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. This risk is managed by using the effective duration or option adjusted methodology. It is widely used in the management of fixed income assets by quantifying the risk of interest rate changes. This methodology takes into account optionality on bonds and scales the risk of price changes on bonds depending upon the degree of change in rates and the slope of the yield curve. Within the investment policy, operational guidelines specify the degree of interest rate risk taken within the system's fixed income portfolios, with the exception of some portfolios in which credit risk is the predominant factor and is also controlled by specific guidelines. MOSERS believes that the reporting of effective duration found in the tables below quantifies to the fullest extent possible the interest rate risk of the system's fixed income securities.

Effective Duration of Fixed Income Assets by Security Type

Fixed Income Security Type	Fair Value June 30, 2015	Percent of all Fixed Income Assets	Weighted Average Effective Duration (Years)	Interest Rate Risk Requiring Further Disclosure
U.S. treasuries	$4,447,616,087	69.2%	5.2	See below
Implicit U.S. government agencies	607,964,107	9.5	0.1	None
Collateralized mortgage obligations	1,004,420	0.0	0.1	None
Non-U.S. sovereign	47,662,622	0.7	5.0	None
Asset-backed securities	2,108,766	0.0	0.0	None
Corporate bonds	46,712,411	0.7	0.1	None
Bank loans	183,457	0.0	0.3	None
Bank deposits	550,091,667	8.6	0.0	None
Repurchase agreements	467,930,531	7.3	0.0	None
Pooled investments	256,670,756	4.0	0.0	None
	$6,427,944,824	100.0%	3.7	

Effective Duration Analysis of U.S. Treasuries

Maturity	Fair Value June 30, 2015	Average Effective Duration of the Security Type (Years)	Contribution to Effective Duration (Years)
Less than 1 year to maturity	$ 325,025,134	0.1	0.0
1- to 10-year maturities	4,122,590,953	5.6	5.2
	$4,447,616,087		5.2

MOSERS invests in mortgage-backed securities, which are reported at fair value in the *Statements of Fiduciary Net Position* of the pension trust funds. Such securities have embedded within them the risk of being called, whereby the issuer has the option to keep the debt outstanding in rising interest rate environments or repay the debt in declining interest rate environments, a factor that advantages the issuer. MOSERS invests in these securities to diversify the portfolio with high quality and liquid investments, which capture a significant yield premium that is intended to compensate for the call risk. This risk is incorporated within the effective duration calculation used in the interest rate risk analysis.

Repurchase Agreements

Tri-party repurchase agreements (repos) are secured loans by a financial institution with the collateral held at a custodian bank. In a tri-party repo transaction, MOSERS transfers cash to a financial institution and the financial institution transfers securities to the custodian bank. Simultaneously, the financial institution promises to repay the loan in the future plus interest in exchange for the return of the securities.

Reverse repurchase agreements (reverse repos) are used to convert securities into cash. In a reverse repo transaction, MOSERS transfers securities that are owned in the portfolio to a financial institution and the financial institution transfers cash to MOSERS. Simultaneously, MOSERS promises to repay the loan in the future plus interest in exchange for the return of the securities.

Typical collateral for repos and reverse repos include treasury securities, agency securities, mortgage-backed securities, investment grade corporate bonds, commercial paper, and common stock. Repos and reverse repos are typically done for an overnight term; however, they can be done for a longer term. MOSERS enters into repo transactions to earn interest on short-term funds and enters into reverse repos to finance the purchase of additional securities.

The yield earned by MOSERS on the repo transactions ranged from 0.01% to 0.36% and had maturities of one day to 35 days. The yield earned by the counterparties on the reverse repo transactions ranged from 0.15% to 0.55% and had maturities of one month to one year. The maturities of the investments made with reverse repo proceeds generally have maturities of one to 10 years.

In repo transactions, MOSERS may have credit risk if the counterparty fails to repay the loan and the value of the securities held as collateral falls below the loan balance. To minimize this risk, MOSERS requires the financial institution to send collateral with a fair value greater than the value of the loan and revalues the collateral on a daily basis. As of fiscal year end, MOSERS held approximately $25.9 million of counterparty collateral in excess of the repo balance.

In reverse repo transactions, MOSERS may be subject to credit risk if the counterparty fails to return the securities and the value of the securities held as collateral rises above the loan balance. To minimize this risk, MOSERS sends the minimum amount of collateral required by the financial institution and requires the financial institution to revalue the collateral and return excess collateral on a daily basis. As of fiscal year end, counterparties held approximately $24 million of MOSERS collateral in excess of the reverse repo balance. Due to a reverse repo trade that was executed on June 30, 2015, but did not settle until July 1, 2015, there was a receivable in the account. The trade was done to replace a reverse repo that was maturing on July 1, 2015. Netting the receivable with the reverse repo balance will result in a total reverse repo exposure of approximately $3.86 billion.

The tables below summarize MOSERS' exposure for repo and reverse repo transactions.

Repurchase Agreements by Collateral Type

Collateral Type	Fair Value of Collateral June 30, 2015	Fair Value of Repurchase Agreements June 30, 2015	Excess (Deficit) Collateral	Percent Over (Under) Collateralized
U.S. treasuries/U.S. agencies	$196,786,889	$192,928,255	$ 3,858,634	
Common stock	297,001,503	275,000,000	22,001,503	
Accrued interest	0	2,276	(2,276)	
	$493,788,392	$467,930,531	$25,857,861	5.5%

Reverse Repurchase Agreements by Collateral Type

Collateral Type	Fair Value of Collateral June 30, 2015	Fair Value of Repurchase Agreements June 30, 2015	Excess (Deficit) Collateral	Percent Over (Under) Collateralized
U.S. treasuries	$3,892,303,793	$4,203,408,628	$(311,104,835)	
Receivables	(10,302,703)	(350,083,758)	339,781,055	
Accrued interest	0	4,671,351	(4,671,351)	
	$3,882,001,090	$3,857,996,221	$ 24,004,869	0.6%

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. MOSERS' currency risk exposures, or exchange rate risk, primarily reside within MOSERS' international equity investment holdings. MOSERS' implementation policy allows external managers to decide what action to take regarding their respective portfolio's foreign currency exposures using currency forward contracts. MOSERS' exposure to foreign currency risk in U.S. dollars as of June 30, 2015, is highlighted in the table below.

Currency Exposures by Asset Class

Currency	Cash & Cash Equivalents	Equities	Fixed Income	Alternatives	Total
Argentine Peso	$ 60	$ 2			$ 62
Australian Dollar	(146,042)	(135,611)			(281,653)
Brazilian Real	35,307	17,532,686	$ 6,287,380		23,855,373
Canadian Dollar	(121,687)	(193,071)	(44,639)		(359,397)
Chilean Peso	22,026	2,498,859	62,530		2,583,415
Czech Koruna	7,039	467,850			474,889
Danish Krone		14,891,729			14,891,729
Egyptian Pound	21	512,528			512,549
Euro	12,274,041	169,275,525	(1,708,526)	$76,150,971	255,992,011
Hong Kong Dollar	(47,942)	126,996,901			126,948,959
Hungarian Forint	12,867	531,645			544,512
Indian Rupee	191,592	19,033,637			19,225,229
Indonesian Rupiah	4,046	6,566,549	5,723,118		12,293,713
Israeli Shekel	1	13			14
Japanese Yen	1,641,409	254,477,905	20,921		256,140,235
Malaysian Ringgit	10,546	12,369,658	4,897,029		17,277,233
Mexican Peso	1,317,131	13,284,562	5,946,757		20,548,450
Peruvian Nuevo Sol	5				5
Philippine Peso	29,985	3,476,121			3,506,106
Polish Zloty	8,956	3,762,524	3,138,397		6,909,877
Russian Ruble		372,809	3,747,036		4,119,845
Singapore Dollar		26,976,120			26,976,120
South African Rand	(269,457)	20,128,042	5,632,468		25,491,053
South Korean Won	(1,424,054)	49,237,179	1,634,835		49,447,960
Swedish Krona		3,142,638			3,142,638
Swiss Franc		99,736,023			99,736,023
Taiwan New Dollar	131,086	40,061,417			40,192,503
Thai Baht		25,577,178	1,036,457		26,613,635
Turkish Lira	28,605	8,878,103	5,445,951		14,352,659
British Pound Sterling	69,524	126,967,957	(104,859)		126,932,622
Colombian Peso	30,621	1,205,298	3,723,052		4,958,971
Venezuelan Boliviar	17,992				17,992
Moroccan Dirham	561				561
Romanian New Leu			264,186		264,186
Qatari Riyal	18,650	2,393,043			2,411,693
United Arab Emirates Dirham	12,947	1,656,548			1,669,495
	$13,855,836	$1,051,682,367	$45,702,093	$76,150,971	$1,187,391,267

Derivatives

Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates, or financial indexes. They include futures contracts, swap contracts, options contracts, and forward foreign currency exchange. The following tables summarize the various contracts in the portfolio as of June 30, 2015.

Futures Contracts

Futures Contract	Expiration Date	Long (Short)	Notional/Fair Value	Exposure
Currency futures	September 2015	(Short)	$ (49,568,294)	$ 139,034
Fixed income futures	September 2015	Long	1,965,731,469	(1,256,555)
Equity index futures	July 2015	Long	11,141,979	91,807
Equity index futures	September 2015	Long	220,592,826	827,071
Commodity futures	August 2015	Long	300,750,730	4,644,672
Commodity futures	September 2015	Long	253,011,128	5,737,410
Commodity futures	October 2015	Long	2,611,717	83,776
Commodity futures	November 2015	(Short)	(4,512,038)	(249,037)
Commodity futures	December 2015	(Short)	(2,886,175)	(28,900)
Commodity futures	February 2016	Long	3,853,429	67,893
Commodity futures	March 2016	Long	5,200,735	48,524
Commodity futures	April 2016	(Short)	(11,309,374)	(175,724)
Commodity futures	May 2016	(Short)	(4,323,115)	(68,116)
Total			$2,690,295,017	$ 9,861,855

Foreign Currency Forward Contracts at June 30, 2015

Currency	Net Notional Long (Short)	Exposure
Brazilian Real	$(2,668,156)	$ 42,669
Euro	(828,647)	(18,503)
Indonesian Rupiah	(21,746)	(780)
Indian Rupee	0	(13,729)
Polish Zloty	2,135,936	(57,152)
Russian Ruble	(1,267,182)	47,123
New Turkish Lira	(857,502)	(13,983)
South African Rand	246,796	5,226
Colombian Peso	283,303	3,725
Chilean Peso	786,831	(6,704)
Romanian Leu	1,551,762	(1,118)
Philippine Peso	241,034	(2,970)
U.S. Dollar	381,375	0
Foreign currency forward contract asset (liability)	$ (16,196)	$ (16,196)

Swap Contracts

Counterparty Credit Rating	Notional Value	Exposure
Total Return Swaps - Equity		
A-	$ 70,044,982	$ (23,172)
BBB+	39,888,477	1,643,365
Total	$ 109,933,459	$ 1,620,193
Total Return Swaps - Commodities		
A+	$ 618,410,348	$ (706,289)
A-	257,416,639	(293,870)
Total	$875,826,987	$ (1,000,159)
Total Return Swaps - Fixed Income		
A	$204,928,993	$ (8,873,323)
A-	1,004,548,172	(1,439,343)
Total	$1,209,477,165	$(10,312,666)

While the board has no formal policy specific to derivatives, the MOSERS investment implementation program, through its external managers, holds investments in futures contracts, swap contracts, and forward foreign currency exchange. MOSERS enters into these certain derivative instruments as investments primarily to enhance the performance and reduce the volatility of its portfolio. It enters swaps and futures contracts to gain or hedge exposure to certain markets and to manage interest rate risk and enters into forward foreign currency exchange contracts primarily to hedge foreign currency exposure.

The notional values associated with these derivative instruments are generally not recorded in the financial statements; however, the amounts for the exposure on these instruments are recorded in the *Statements of Fiduciary Net Position* and the total changes in fair value for the year are included as investment income in the *Statements of Changes in Fiduciary Net Position*. For the year ended June 30, 2015, the change in fair value in the swap contracts resulted in a loss of $528.9 million of investment income. The change in fair value in the futures contracts resulted in $169.2 million of investment income and the change in fair value of the foreign exchange contracts resulted in $19.2 million of investment income. MOSERS does not anticipate additional significant market risk from the derivative arrangements.

MOSERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. MOSERS' investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. MOSERS anticipates that the counterparties will be able to satisfy their obligations under the contracts. Investments in limited partnerships and commingled funds may include derivatives that are not shown in the derivative totals.

Limited Partnerships

Many of MOSERS' alternative investments are organized in the form of limited partnerships. In these partnerships, the manager is a general partner, and the limited partners are the investors. Investments in limited partnerships are accounted for using the equity method of accounting, and their earnings or losses for the period are included in investment income using the equity method.

As of June 30, 2015, MOSERS had contracts with over 99 limited partnerships across various types of alternative investments which collectively represent 56% of the total fund. A *Schedule of Limited Partnerships* follows on pages 43-44.

Securities Lending Program

The board of trustees' investment policy permits the pension trust funds to participate in a securities lending program. Fixed income, international equity and domestic equity securities of the pension trust funds are loaned to participating brokers who provide collateral in the form of cash, U.S. Treasury or government agency securities, or letters of credit issued by approved banks. Collateral must be provided in the amount of 102% of fair value for domestic loans and 105% of fair value for international loans. MOSERS does not have the authority to pledge or sell collateral securities, without borrower default. Securities on loan at fiscal year end for cash collateral and on loan for noncash collateral are presented in the schedule on page 45. On June 30, 2015, MOSERS had no credit risk exposure to borrowers because the collateral amounts received exceeded amounts out on loan.

As of June 30, 2015, Deutsche Bank AG, New York branch, served as the agent for the fixed income, domestic equity and international equity securities lending programs. In this capacity, MOSERS reduces credit risk by allowing Deutsche Bank to lend these securities to a diverse group of dealers on behalf of MOSERS. Indemnification against dealer default is provided by Deutsche Bank AG, an "A-rated" bank. With each of MOSERS' securities lending programs, the majority of loans are open and can be terminated on demand by either MOSERS or the borrower. Net income from the three lending programs is split on a 90/10 basis between MOSERS and Deutsche Bank, respectively.

Daily monitoring of securities that are on loan ensures proper collateralization levels and mitigates counterparty risk. Cash collateral from all three programs is commingled and invested in a separately managed short-term investment account for MOSERS. This cash collateral account is managed by Deutsche Bank. On June 30, 2015, the cash collateral account had a fair value of $19,228,051 and a weighted average maturity of one day. For all of the securities lending operational services, the custodian is paid an annual fee, which is netted against MOSERS' earnings in the securities lending programs managed by Deutsche Bank.

Schedule of Limited Partnerships

Partnership Name	Style	Investments at Fair Value as of June 30, 2015
Actis Emerging Markets III	Emerging markets	$ 36,797,489
Actis Global IV	Emerging markets	20,202,698
Aeolus Property Catastrophe Spire Fund, LP	Reinsurance	52,603,734
African Development Partners I, LLC	Emerging markets	33,181,325
African Development Partners II, LLC	Emerging markets	7,573,128
Alinda Infrastructure Fund I, LP	Infrastructure	32,066,063
American Industrial Partners Capital Fund V, LP	Corporate buyout	37,604,116
AQR Absolute Return Institutional Fund, LP	Multi-strategy	66,540,059
AQR DELTA Sapphire Fund, LP	Muti-strategy	353,179,130
AQR Global Risk Premium Fund IV, LP	Beta-balanced	414,845,844
AQR Style Premia Fund, LP	Muti-strategy	52,466,872
Axiom Asia Private Capital Fund II, LP	Emerging markets	37,066,247
Axiom Asia Private Capital Fund III, LP	Emerging markets	20,503,449
Axxon Brazil Private Equity Fund II B, LP	Emerging markets	13,946,019
Bayview Opportunity Domestic III B, LP	Distressed real estate debt	50,086,832
Bayview Opportunity Domestic, LP	Distressed real estate debt	7,903,582
Blackstone Real Estate Partners IV	Active real estate	33,420,520
Blackstone Real Estate Partners V	Active real estate	77,723,284
Blackstone Real Estate Partners VI	Active real estate	62,991,803
Blackstone Real Estate Partners VII	Active real estate	69,328,381
Blackstone Topaz Fund, LP	Multi-strategy - fund-of-funds	406,314,976
Blakeney Onyx LP	Emerging markets	71,261,126
Brevan Howard, LP	Global macro	90,199,763
Bridgepoint Europe III A, LP	Corporate buyout	15,044,243
Bridgepoint Europe IV B, LP	Corporate buyout	27,226,751
Bridgewater All Weather, LLC	Beta-balanced	481,531,232
Bridgewater Associates - Diamond Ridge Fund, LLC	Global macro	108,533,262
Campbell Timber Fund II-A, LP	Timberland	52,120,115
CarVal Investors CVI Global Value Fund A, LP - Private debt	Distressed real estate debt	13,100,000
CarVal Investors CVI Global Value Fund A, LP - Real estate	Distressed real estate debt	13,100,000
Castlelake Aviation II, LP	Special situations	35,296,413
Catalyst Fund Limited Partnership III	Canadian distressed debt	54,588,075
Catalyst Fund Limited Partnership IV	Canadian distressed debt	17,172,945
Catterton Partners V, LP	Corporate buyout	15,881,814
Catterton Partners VI, LP	Corporate buyout	21,340,408
Catterton Partners VII, LP	Corporate buyout	17,696,956
Cornwall Domestic, LP	Muti-strategy	65,443,517
Davidson Kempner Institutional Partners, LP	Event driven	75,611,906
DDJ Capital Management - B IV Capital Partners, LP	Distressed debt	321,435
Diamondback Partners, LP	Long/short - equity	388,297
DRI Capital - LSRC	Intellectual property	21,872,792
DRI Capital - LSRC II	Intellectual property	1
EIG Energy Co. - Investment I	Energy - infrastructure	5,833,747
EIG Energy Fund XIV, LP	Energy - mezzanine	20,549,149
EIG Energy Fund XV, LP	Energy - mezzanine	37,078,109
EIG Energy Fund XVI, LP	Energy - mezzanine	7,013,822
Elliott International, Ltd.	Multi-strategy	115,569,705
Empyrean Capital Fund, LP	Event driven	31,651,180
Eton Park Fund, LP	Multi-strategy	1,054,914
Farallon Capital Institutional Partners, LP	Multi-strategy	3,472,753

Schedule of Limited Partnerships continued on page 44

Schedule of Limited Partnerships continued from page 43

Partnership Name	Style	Investments at Fair Value as of June 30, 2015
Garnet Sky Investors Company, Ltd.	Timberland	105,421,088
Gateway Energy & Resource Holdings, LLC	Energy - diversified	27,418,845
Glenview Capital Opportunity Fund, LP	Long/short - equity	45,339,075
Global Forest Partners GTI7 Institutional Investors Company, Ltd.	Timberland	82,052,305
HBK Offshore Fund, Ltd.	Multi-strategy	75,784,533
JLL Partners Fund V, LP	Corporate buyout	14,053,025
JLL Partners Fund VI, LP	Corporate buyout	51,086,938
King Street Capital, LP	Credit driven	6,042,371
King Street Capital, Ltd.	Credit driven	563,848
Linden Capital Partners Co. - Investment, LP	Corporate buyout	8,161,765
Linden Capital Partners II, LP	Corporate buyout	31,720,590
Mast Credit Opportunities I, LP	Credit driven	85,205,242
Merit Energy Partners F-II, LP	Energy - oil & gas	8,448,579
MHR Institutional Partners IIA, LP	Distressed debt	46,482,787
MHR Institutional Partners III, LP	Distressed debt	46,962,553
MHR Institutional Partners IV, LP	Distressed debt	4,337,519
Millennium Technology Value Partners Co. - Investment	Direct secondaries	3,531,453
Millennium Technology Value Partners II, LP	Direct secondaries	14,123,358
Moon Capital Global Equity Offshore Fund, Ltd.	Long/short - equity	842,951
New Mountain Partners III, LP	Corporate buyout	43,855,577
Newport Pioneer, LLC	Multi-strategy - fund-of-funds	1,112,622
Oaktree European Credit Opportunities Fund, LP	European loans	698,654
OCM Opportunities Fund IVB, LP	Distressed debt	272,075
OCM Opportunities Fund VII B, LP	Distressed debt	11,907,448
OCM Opportunities Fund VIII B, LP	Distressed debt	24,349,729
OCM Power Opportunities Fund III, LP	Corporate buyout	17,219,217
OCM Real Estate Opportunities Fund III, LP	Active real estate	4,355,858
OCM/GFI Power Opportunities Fund II, LP	Corporate buyout	1,611,631
Perry Partners, LP	Multi-strategy	45,201
Pharo Macro Fund, Ltd.	Global macro	121,343,381
Resource Management Service - Wildwood Timberlands, LLC	Timberland	71,128,944
Silver Creek Special Opportunities Fund I, LP	Special situations - fund-of-funds	16,441,267
Silver Creek Special Opportunities Fund II, LP	Special situations - fund-of-funds	22,828,977
Silver Lake Partners II, LP	Corporate buyout	12,787,923
Silver Point Capital Fund, LP	Credit driven	289,447
SIRIS II Co - Investment I	Corporate buyout	6,035,512
SIRIS II Co - Investment II	Corporate buyout	6,000,000
SIRIS Partners II, LP	Corporate buyout	14,398,024
SIRIS Partners III, LP	Corporate buyout	188,722
Standard Investment Research Hedged Equity Fund, LP	Equity market neutral	91,222,068
StepStone Capital Buyout Fund I, LP	Corporate buyout - fund-of-funds	11,341,457
StepStone Capital Buyout Fund II, LP	Corporate buyout - fund-of-funds	19,469,442
StepStone Opportunities Fund II, LP	Private equity co-investment	1,846,396
The Veritas Capital Fund III, LP	Corporate buyout	31,817,535
The Veritas Capital Fund IV, LP	Corporate buyout	59,752,049
TPG - Axon Partners (Offshore), Ltd.	Long/short - equity	1,328,662
Viking Global Equities III, Ltd.	Long/short - equity	160,278,379
Visium Balanced Fund, LP	Long/short - equity	108,624,726
Wellington Management - Spindrift Investors (Bermuda)	Long/short - equity	1,023,740
Other Miscellaneous	Miscellaneous	12,488
		$4,827,465,957

Investments as of June 30, 2015

	Pension Trust Funds		Internal Service Funds	
	Investments at Cost Value	Investments at Fair Value	Investments at Cost Value	Investments at Fair Value
Common stocks				
Out on loan	$ 14,955,625	$ 16,786,290		
Not on securities loan	359,701,222	398,461,408		
Total	374,656,847	415,247,698		
International equities				
Out on loan	2,121,076	2,262,833		
Not on securities loan	175,898,606	856,056,819		
Total	178,019,682	858,319,652		
Bank loans	555,750	98		
Corporate bonds	2,046,826	996,498		
Foreign currencies	83,401	(2,687)		
Government bonds	53,233,538	43,001,590		
International corporate bonds	5,782,441	3,964,906		
Limited partnerships	3,198,991,680	4,827,465,957		
REITs	3,617	10,056		
Repurchase agreements	12,153,028	12,153,028	$4,482,083	$4,482,083
Short-term investment funds	2,256,385,878	2,256,385,878		
Treasury bonds, notes and bills	4,164,585,677	4,109,906,639		
Total investments				
Out on loan	17,076,701	19,049,123		
Not on securities loan	10,229,421,664	12,508,400,190	4,482,083	4,482,083
Total	$10,246,498,365	$12,527,449,313	$4,482,083	$4,482,083
Reconciliation of investments to *Statements of Fiduciary Net Position*				
Total from above		$12,527,449,313		
Less short-term investments:				
Repurchase agreements		(12,153,028)		
Short-term investment funds		(2,237,306,892)		
Less invested securities lending collateral:				
Short-term investment funds		(19,078,986)		
Corporate bonds		(149,065)		
Investments on *Statements of Fiduciary Net Position*		$10,258,761,342		

Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS office.

(4) Capital Assets

Office building, furniture, fixtures, and equipment costing $1,000 or more when acquired are recorded at cost at the time of acquisition and are reported net of accumulated depreciation. Improvements, which increase the useful life of the property, are also capitalized. Maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight-line method over the estimated useful life of the related assets according to the following guidelines:

- 5 years for furniture, fixtures, and equipment
- 40 years for building
- 5 years for software and licensing

Below are schedules of the capital asset account balances for the pension trust funds and the internal service funds – State of Missouri Deferred Compensation Plan as of June 30, 2014, and June 30, 2015, and changes to those account balances during the year ended June 30, 2015.

Pension Trust Funds
Capital Asset Account

	Land	Building and Building Improvements	Furniture Fixtures and Equipment	Software and Licensing	Total Capital Assets
Capital assets					
Balances June 30, 2014	$267,286	$4,535,929	$1,299,431	$266,071	$6,368,717
Additions	0	126,944	100,455	11,190	238,589
Deletions	0	0	(50,766)	0	(50,766)
Balances June 30, 2015	267,286	4,662,873	1,349,120	277,261	6,556,540
Accumulated depreciation					
Balances June 30, 2014	0	1,425,669	1,090,496	97,796	2,613,961
Depreciation expense	0	147,061	91,279	53,214	291,554
Deletions	0	0	(50,766)	0	(50,766)
Balances June 30, 2015	0	1,572,730	1,131,009	151,010	2,854,749
Net capital assets June 30, 2015	$267,286	$3,090,143	$ 218,111	$126,251	$3,701,791

Internal Service Funds
Capital Asset Account

	Leasehold Improvements	Furniture Fixtures and Equipment	Software and Licensing	Total Capital Assets
Capital assets				
Balances June 30, 2014	$3,880	$6,319	$4,950	$15,149
Additions	0	0	0	0
Deletions	0	0	0	0
Balances June 30, 2015	3,880	6,319	4,950	15,149
Accumulated depreciation				
Balances June 30, 2014	0	3,746	1,398	5,144
Depreciation expense	970	698	990	2,658
Deletions	0	0	0	0
Balances June 30, 2015	970	4,444	2,388	7,802
Net capital assets June 30, 2015	$2,910	$1,875	$2,562	$ 7,347

(5) Employers' Net Pension Liability

The components of the net pension liability (the retirement system's liability determined in accordance with GASB Statement 67 less the fiduciary net position) as of June 30, 2015, are shown in the *Schedule of Employers' Net Pension Liability* below.

Schedule of Employers' Net Pension Liability

	MSEP	Judicial Plan
Total pension liability	$11,727,618,410	$482,969,311
MOSERS fiduciary net position	8,516,654,912	130,851,263
Employers' net pension liability	$ 3,210,963,498	$352,118,048
Plan net position as a percentage of the total pension liability	72.62%	27.09%
Covered employee payroll	$ 1,918,527,768	$ 55,656,457
Employers' net pension liability as a percentage of employee covered payroll	167.37%	632.66%

Actuarial valuation of an ongoing plan involves estimates of the reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The last experience study was performed in 2012. The *Schedule of Changes in Employers' Net Pension Liability* presents multi-year trend information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the total pension liability. These schedules are presented in the *Required Supplementary Information* on page 50. The total pension liability as of June 30, 2015, is $11,727,618,410 for MSEP and $482,969,311 for the Judicial Plan based on an actuarial valuation performed as of June 30, 2015, and a measurement date of June 30, 2015 using generally accepted actuarial procedures.

Changes to Amortization Period

In June 2013, the board approved a change to the period over which unfunded actuarial accrued liabilities are amortized to reduce the amortization period from an open 30 years to a closed 30 years beginning July 1, 2014. This will continue to reduce by one year for each subsequent annual valuation until the period reaches one year. The board intends to reexamine the amortization period in connection with the 2030 actuarial valuation to determine whether or not it should be reduced below 15 years.

The *Summary of Actuarial Assumptions* below applies to all periods included in the measurement of the total pension liability.

Summary of Actuarial Assumptions

	MSEP	Judicial Plan
Valuation date	June 30, 2015	June 30, 2015
Actuarial cost method	Entry age normal	Entry age normal
Amortization method	Level percent	Level percent
Remaining amortization period	29 years closed	29 years closed
Asset valuation method	3-year rolling smoothed +25/-20% market corridor	3-year rolling smoothed +25/-20% market corridor
Actuarial assumptions:		
Investment rate of return	8.00%	8.00%
Projected salary increases	3.0-5.9%	3.0-5.2%
Rate of payroll growth	0%*	3.00%
COLAs	4.00%**	4.00%
Price inflation	2.50%	2.50%
Remaining amortization period	29 years	29 years

* *Wage inflation is assumed to be 3% for June 30, 2014 valuation, 0% for June 30, 2015 valuation, and 3% thereafter.*

** *On a compound basis, 4% for the first 12 years, 3.06% for the 13th year, and 2.0% per year thereafter.*

Mortality rates are based on the RP2000 combined healthy mortality table, projected to 2016 with Scale AA. The pre-retirement mortality rates used were 100% of the post-retirement mortality rates for males and 80% of the post-retirement mortality rates for females.

The discount rate used to measure the total pension liability was 8.0%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be made using the actuarially determined rates based on the board's funding policy, which established the contractually required rates under Missouri state law. Based on those assumptions, MOSERS' fiduciary net position was projected to be available to make all the projected future benefit payments of the current plan members. As a result, the long-term expected rate of return on pension plan investments of 8.0% was applied to all periods of projected benefit payments to determine the total pension liability.

The table below presents the net pension liability of the state of Missouri as of June 30, 2015, calculated using the discount rate of 8.0%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1.0% lower (7.0%) or 1.0% higher (9.0%) than the current rate.

Sensitivity of Net Pension Liability to Changes in the Discount Rate

Employers' Net Pension Liability	1% Decrease (7.0%)	Current Discount Rate (8.0%)	1% Increase (9.0%)
MSEP	$4,525,228,508	$3,210,963,498	$2,107,182,821
Judicial Plan	397,890,094	352,118,048	312,554,919

The funding status of the plans and *Employer Schedule of Funding Progress* can be found in the *Actuarial Section* on page 100.

(6) Contributions and Reserves

The MSEP and the Judicial Plan are pension plans covering substantially all state of Missouri employees and judges. The state of Missouri and its component employers are obligated by state law to make required contributions to the plans. The required contributions are expressed as a level percentage of covered payroll and are actuarially determined using an individual entry-age normal actuarial cost method. Contributions began July 2014 at the contribution rate determined by the June 30, 2013 actuarial valuation (16.97% and 58.45% for MSEP and Judicial Plan, respectively) and will continue at that rate until the actuarial funding of the plans are at least 80%. The unfunded accrued liabilities are amortized over a closed 29-year period as of June 30, 2015. MSEP 2011 employees are required to contribute 4% of their pay. Costs of administering the plans are financed from the contributions to the pension trust funds and investment earnings.

(7) Other Post Employment Benefits (OPEB)

In addition to the retirement benefits provided through MOSERS, the state of Missouri also funds, either partially or in its entirety, OPEB for eligible retirees as follows:

Retiree Life Insurance

Members who retire on or after October 1, 1985, are eligible for $5,000 of state-sponsored basic life insurance coverage if they retire directly from active employment. As of June 30, 2015, 24,361 retirees were participating in the program. This insured defined benefit coverage is financed on a percentage of payroll (.115%) and is purchased as a group policy through competitive bids and is currently administered through The Standard insurance company. The cost for the year ended June 30, 2015, was $1,872,011. Premiums are contributed entirely by the state and its component employers as provided by Section 104.515, RSMo.

Retirees of the Department of Labor and Industrial Relations (DOLIR), who retired prior to January 1, 1996, are eligible for state-sponsored insured defined benefit insurance coverage in the same amount of coverage they were receiving through the DOLIR. As of June 30, 2015, 246 retirees were participating in the program. The coverage for this closed group is purchased as a group policy through competitive bids at a current cost of $2.07 per thousand dollars of coverage, per month, per eligible participant ($29,937 for the year ended June 30, 2015). Premiums are paid entirely by the DOLIR as provided by Section 228.225, RSMo. Retirees of the DOLIR who retired on or after January 1, 1996, are eligible for $5,000 of state-sponsored life insurance coverage if they retire directly from active employment. They are included in the group described in the preceding paragraph.

Long-Term Disability Insurance (LTD)

MOSERS provides LTD coverage for eligible members and generally includes those active members of MOSERS' retirement plans who do not have other disability coverage and are not yet eligible to receive normal (unreduced) retirement benefits. There were 33,405 members covered under the program as of June 30, 2015. This insured defined benefit coverage is financed on a percentage of covered payroll (.55%). Purchased as group policy through competitive bids, LTD is administered by The Standard insurance company. The cost for the year ended June 30, 2015, was $7,943,578. Premiums are contributed by the state and its component employers as provided for by Section 104.515, RSMo.

Post-employment Retiree Health Care

MOSERS participates in a cost-sharing multiple-employer defined benefit post-employment health care plan administered by the Missouri Consolidated Health Care Plan (MCHCP). The plan provides medical benefits to retirees of participating governmental entities. Retirees who had medical insurance coverage for six months immediately prior to termination or state-sponsored medical coverage since the effective date of the last enrollment period (or since first eligible), before they are eligible to retire, may continue coverage into retirement.

MCHCP issues a publicly available financial report that includes financial statements and required supplementary information for the post-employment health care plan. The report may be obtained online at *www.mchcp.org* or by calling (800) 487-0771 or writing to MCHCP, 832 Weathered Rock Court, P.O. Box 104355, Jefferson City, MO 65110-4355.

Plan funding requests are actuarially determined, approved by the MCHCP Board of Trustees and subject to appropriation by the Missouri General Assembly. MOSERS contributed $236,012 in FY13, $257,003 in FY14, and $267,315 in FY15 in accordance with the state's funding policy toward the annual required contributions for post-employment retiree health care, which equaled MOSERS' required contribution each year.

(8) Plan Termination

MOSERS and its related plans are administered in accordance with Missouri statutes. Plans can only be terminated by an amendment to these statutes by the Missouri legislature.

On April 26, 2005, Senate Bill 202 was enacted, which terminated the Administrative Law Judges and Legal Advisors' Plan (ALJLAP) for new hires only. Under this legislation, individuals who assume a position after April 26, 2005, who would have otherwise been covered by the ALJLAP, will instead participate in the MSEP or the MSEP 2000, depending on when they initially became state employees. For fiscal years 2005 and after, all liabilities and assets of the ALJLAP were transferred and combined with the MSEP. Membership totals for ALJLAP members is included in the MSEP in all relevant sections of this report.

(9) Commitments

As of June 30, 2015, MOSERS has $433,149,770 and €5,469,724 unfunded commitments in the illiquids asset class.

(10) Contingencies

There were no contingencies which would have a material impact on the financial statements at June 30, 2015.

Pension Trust Funds

Schedule of Changes in Employers' Net Pension Liability | For Years Ended June 30, 2014 and 2015*

MSEP

	2014	2015
Total pension liability		
Service cost	$ 158,116,026	$ 150,412,577
Interest on the total pension liability	869,878,195	896,451,618
Difference between expected and actual experience	12,376,237	(27,983,267)
Assumption changes	0	(57,568,553)
Benefit payments	(679,014,251)	(725,786,536)
Refunds	(1,421,856)	(2,479,264)
Net change in total pension liability	359,934,351	233,046,575
Total pension liability - beginning	11,134,637,484	11,494,571,835
Total pension liability - ending (a)	$11,494,571,835	$11,727,618,410
Plan fiduciary net position		
Employer contributions	$ 326,370,336	$ 329,752,832
Employee contributions	14,025,328	18,099,455
Pension plan net investment income (loss)	1,485,159,992	(237,070,529)
Benefit payments	(679,014,251)	(725,786,536)
Refunds	(1,421,856)	(2,479,264)
Pension plan administrative expense	(7,336,922)	(8,077,692)
Other	5,161,629	5,434,820
Net change in plan fiduciary net position	1,142,944,256	(620,126,914)
Plan fiduciary net position - beginning	7,993,837,570	9,136,781,826
Plan fiduciary net position - ending (b)	9,136,781,826	8,516,654,912
Net pension liability - ending (a)-(b)	$ 2,357,790,009	$ 3,210,963,498
Plan fiduciary net position as a percentage of total pension liability	79.49%	72.62%
Covered employee payroll	$ 1,902,719,928	$ 1,918,527,768
Net pension liability as a percentage of covered employee payroll	123.92%	167.37%

** Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

REQUIRED SUPPLEMENTARY INFORMATION

Pension Trust Funds

Schedule of Changes in Employers' Net Pension Liability | For Years Ended June 30, 2014 and 2015*

Judicial Plan

	2014	2015
Total pension liability		
Service cost	$ 8,990,293	$ 10,613,686
Interest on the total pension liability	34,013,615	36,161,612
Difference between expected and actual experience	13,360,614	5,103,664
Benefit payments	(29,406,625)	(31,245,906)
Net change in total pension liability	26,957,897	20,633,056
Total pension liability - beginning	435,378,358	462,336,255
Total pension liability - ending (a)	$462,336,255	$ 482,969,311
Plan fiduciary net position		
Employer contributions	$ 29,264,877	$ 32,696,686
Employee contributions	294,810	488,193
Pension plan net investment income (loss)	21,394,750	(3,610,352)
Benefit payments	(29,406,625)	(31,245,906)
Pension plan administrative expense	(105,693)	(123,015)
Net change in plan fiduciary net position	21,442,119	(1,794,394)
Plan fiduciary net position - beginning	111,203,538	132,645,657
Plan fiduciary net position - ending (b)	132,645,657	130,851,263
Net pension liability - ending (a)-(b)	$329,690,598	$ 352,118,048
Plan fiduciary net position as a percentage of total pension liability	28.69%	27.09%
Covered employee payroll	$ 49,587,936	$ 55,656,457
Net pension liability as a percentage of covered employee payroll	664.86%	632.66%

** Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Pension Trust Funds

Schedule of Employer Contributions | Last Ten Years

MSEP

Year Ended June 30	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution**	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a Percentage of Covered Payroll*
2006	$226,338,183	$226,338,183	$0	$1,777,277,138	12.7%
2007	239,488,751	239,488,751	0	1,846,643,330	13.0
2008	249,770,156	249,770,156	0	1,916,527,398	13.0
2009	252,105,008	252,105,008	0	2,002,402,087	12.6
2010	251,226,187	251,226,187	0	1,945,095,321	12.9
2011	263,418,048	263,418,048	0	1,875,569,816	14.0
2012	263,373,924	263,373,924	0	1,864,069,493	14.1
2013	274,655,284	274,655,284	0	1,880,212,950	14.6
2014	326,370,336	326,370,336	0	1,902,719,928	17.2
2015	329,752,832	329,752,832	0	1,918,527,768	17.2

Judicial Plan

Year Ended June 30	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution**	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a Percentage of Covered Payroll*
2006	$22,401,569	$22,401,569	$0	$40,270,535	55.6%
2007	23,745,467	23,745,467	0	40,846,581	58.1
2008	26,215,309	26,215,309	0	44,542,530	58.9
2009	27,725,882	27,725,882	0	45,505,512	60.9
2010	27,029,198	27,029,198	0	46,112,730	58.6
2011	27,702,682	27,702,682	0	45,888,020	60.4
2012	26,324,526	26,324,526	0	45,835,501	57.4
2013	28,330,649	28,330,649	0	48,697,726	58.2
2014	29,264,877	29,264,877	0	49,587,936	59.0
2015	32,696,686	32,696,686	0	55,656,457	58.7

* *Actuarial contribution rate shown is the actual employer contribution made divided by payroll in force on May 31 reported for valuation. This rate as computed may vary from the board's certified employer contribution rate due to the fluctuations in membership and pay during the year.*

** *Since the percent of payroll contribution rate was applied to pension payroll during the fiscal year, the actuarially determined contribution is equal to the actual contribution.*

REQUIRED SUPPLEMENTARY INFORMATION

Pension Trust Funds

Schedule of Annual Money-Weighted Rate of Return on Investments*

Fiscal Year Ended June 30	Annual money-weighted rate of return- net of investment expense
2014	19.25%
2015	(2.60)

* *Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Pension Trust Funds

Notes to the Schedules of Required Supplementary Information | Last Ten Years

Actuarial Methods and Assumptions for Valuations Performed as of June 30, 2015

The entry-age actuarial cost method of valuation is used in determining liabilities and normal cost. Regular actuarial valuations provide valuable information about the composite change in the unfunded actuarial accrued liabilities (whether or not the liabilities are increasing or decreasing, and by how much). Since the future cannot be predicted with precision, actual experience is expected to differ from assumed experience. Differences occurring in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are expressed as a percent of payroll. A closed 29-year amortization period was used for the June 30, 2015 valuations. The actuarial value of assets is based on a method that fully recognizes expected investment returns and averages unanticipated market returns over a 3-year period. The corridor limit is currently 80% to 125%.

The investment return rate assumption remained the same at 8.0% per year, compounded annually (net of investment expenses) for June 30, 2015. The price inflation assumption used was 2.5% per year. Projected salary assumptions were 3.0% to 5.9% for MSEP and 3.0% to 5.2% for the Judicial Plan with the exception of the 2015 MSEP valuation where valuation payroll is assumed to grow at 0% the first year and 3.0% per year thereafter. The assumption used for annual post-retirement benefit increases (COLA) is 4.0% (on a compound basis) when a minimum COLA is in effect. When no minimum COLA is in effect, price inflation is assumed to be 2.5% and the annual COLA is assumed to be (80% of 2.5%), on a compound basis.

2006 | The actuarial valuations as of June 30, 2006, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2008.

	Amount	Percent of Payroll
MSEP		
Change to an open 30-year amortization period	$(1,244,094)	(0.07)%
Experience and nonrecurring items	2,310,460	.13
Judicial Plan		
Change to an open 30-year amortization period	(265,786)	(0.66)
Experience and nonrecurring items	334,245	.83

2007 | The actuarial valuations as of June 30, 2007, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2009.

	Amount	Percent of Payroll
MSEP		
Change in benefit assumptions or methods	$ (369,329)	(0.02)%
Experience and nonrecurring items	(5,355,266)	(0.29)
Judicial Plan		
Change in benefit assumptions or methods	(273,672)	(0.67)
Experience and nonrecurring items	853,694	2.09

REQUIRED SUPPLEMENTARY INFORMATION

2008

The actuarial valuations as of June 30, 2008, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2010.

	Amount	Percent of Payroll
MSEP		
Change in benefit assumptions or methods	$4,791,318	0.25%
Experience and nonrecurring items	(574,958)	(0.03)
Judicial Plan		
Change in benefit assumptions or methods	(547,873)	(1.23)
Experience and nonrecurring items	(160,353)	(0.36)

2009

The actuarial valuations as of June 30, 2009, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2011.

	Amount	Percent of Payroll
MSEP		
State of Missouri general pay freeze	$ (4,405,285)	(0.22)%
Experience and nonrecurring items	55,466,538	2.77
Change in valuation asset corridor from +/- 20% to +/- 30%	(29,835,791)	(1.49)
Judicial Plan		
State of Missouri general pay freeze	350,392	0.77
Experience and nonrecurring items	496,010	1.09
Change in valuation asset corridor from +/- 20% to +/- 30%	(141,067)	(0.31)

2010

The actuarial valuations as of June 30, 2010, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2012.

	Amount	Percent of Payroll
MSEP		
State of Missouri general pay freeze	$ (2,528,624)	(0.13)%
Addition of new tier of benefits effective 1-1-2011	(17,311,348)	(0.89)
Experience and nonrecurring items	25,480,749	1.31
Change in timing of contributions	(2,528,624)	(0.13)
Judicial Plan		
State of Missouri general pay freeze	(308,955)	(0.67)
Addition of new tier of benefits effective 1-1-2011	(493,406)	(1.07)
Experience and nonrecurring items	438,071	0.95
Change in timing of contributions	(894,587)	(1.94)

2011

The actuarial valuations as of June 30, 2011, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2013.

	Amount	Percent of Payroll
MSEP		
State of Missouri general pay freeze	$(6,376,937)	(0.34)%
Experience and nonrecurring items	17,630,356	0.94
Change in normal cost due to increased participants in MSEP 2011	(2,250,684)	(0.12)
Judicial Plan		
State of Missouri general pay freeze	(293,683)	(0.64)
Experience and nonrecurring items	289,095	0.63
Change in normal cost due to increased participants in MSEP 2011	(169,786)	(0.37)

2012

The actuarial valuations as of June 30, 2012, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2014.

	Amount	Percent of Payroll
MSEP		
Change in assumptions or methods	$21,623,206	1.16%
Experience and nonrecurring items	25,537,752	1.37
Judicial Plan		
Change in assumptions or methods	948,795	2.07
Experience and nonrecurring items	320,849	0.70

2013

The actuarial valuations as of June 30, 2013, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2015.

	Amount	Percent of Payroll
MSEP		
Change in benefit assumptions or methods	$18,990,151	1.01%
Experience and nonrecurring items	(376,043)	(0.02)
Judicial Plan		
Change in benefit assumptions or methods	(603,852)	(1.24)

2014

The actuarial valuations as of June 30, 2014, reflected the following changes to the computed contribution rates for fiscal year ended June 30, 2016.

	Amount	Percent of Payroll
MSEP		
Recognition of asset gains	$1,617,311,939	0.85%
Experience and nonrecurring items	(114,163,196)	(0.06)
Change in normal cost due to increased participants in MSEP 2011 and experience	437,625,583	0.23
Judicial Plan		
Change in normal cost due to increased participants in MSEP 2011 and experience	(51,075,574)	(1.03)
Anticipated change in salary levels	(118,019,288)	(2.38)

2015

The actuarial valuations as of June 30, 2015 reflected the following changes to the computed actuarial determined contribution (ADC) rates for fiscal year ending June 30, 2017. Actual contribution rate differs from computed ADC due to minimum funding policy adopted by the board in September 2014, requiring contributions to remain at 16.97% of covered payroll for MSEP and 58.45% for Judicial plan until the funding ratio is at least 80% for each plan.

	Amount	Percent of Payroll
MSEP		
Recognition of asset losses	$ 767,411,107	0.40%
Experience and nonrecurring items	441,261,387	0.23
Change in normal cost due to increased participants in MSEP 2011 and experience	(460,446,664)	(0.24)
Liability (gain)/loss	(191,852,777)	(0.10)
Change in benefit assumptions or methods	306,964,443	0.16
Minimum funding policy contribution	(115,111,666)	(0.06)
Judicial Plan		
Recognition of asset losses	11,687,856	0.21
Experience and nonrecurring items	41,742,343	0.75
Change in normal cost due to increased participants in MSEP 2011 and experience	(37,289,826)	(0.67)
Liability (gain)/loss	(36,176,697	0.65
Minimum funding policy contribution	(12,244,421)	(0.22)

ADDITIONAL FINANCIAL INFORMATION

Pension Trust Funds

Schedules of Investment Expenses | Year Ended June 30, 2015

Investing activity	MSEP	Judicial Plan	Total
Investment management and administrative fees			
Actis Emerging Markets III & IV - private equity	$ 1,423,324	$ 21,676	$ 1,445,000
Aeolus Property Catastrophe, LP - hedge funds	1,270,276	19,345	1,289,621
African Development Partners I & II, LLC - private equity	1,133,285	17,259	1,150,544
Alinda Infrastructure Fund I, LP - private equity	384,475	5,855	390,330
American Industrial Partners V - private equity	2,829,173	43,086	2,872,259
AQR Absolute Return Institutional Fund, LP - hedge funds	2,174,803	33,120	2,207,923
AQR DELTA Sapphire Fund, LP - hedge funds	3,341,949	50,895	3,392,844
AQR Global Risk Premium Fund, LP - beta-balanced	2,255,958	34,356	2,290,314
AQR Style Premia Fund, LP - beta-balanced	254,997	3,883	258,880
Axiom Asia Private Capital Fund II & III, LP - private equity	1,229,794	18,729	1,248,523
Axxon Brazil Private Equity Fund II - private equity	591,001	9,000	600,001
Bayview Opportunity Domestic, LP - high yield	1,088,709	16,580	1,105,289
Bayview Opportunity Domestic III, LP - real estate	2,073,374	31,575	2,104,949
BlackRock Financial Management Bank Loans - high yield	7,415	113	7,528
Blackstone Real Estate Partners IV, V, VI, & VII - real estate	17,338,915	264,055	17,602,970
Blackstone Topaz Fund, LP - hedge funds	4,023,141	61,268	4,084,409
Blakeney Onyx, LP - emerging markets	1,273,592	19,396	1,292,988
Brevan Howard, LP - hedge funds	1,302,548	19,837	1,322,385
Bridgepoint Europe III A & IV B, LP - private equity	371,174	5,653	376,827
Bridgewater Associates Diamond Ridge Fund, LLC - hedge funds	3,510,680	53,464	3,564,144
Bridgewater All Weather, LLC - beta-balanced	1,848,168	28,146	1,876,314
Campbell Timber Fund II A, LP - timber	499,233	7,603	506,836
CarVal Investors CVI Global Value Fund A, LP - real estate	168,855	2,572	171,427
CarVal Investors CVI Global Value Fund A, LP - private debt	168,855	2,572	171,427
Castlelake Aviation II - private equity	1,045,260	15,918	1,061,178
Catalyst Fund Limited Partnership III & IV - private debt	1,985,950	30,244	2,016,194
Catterton Partners V, VI, & VII, LP - private equity	1,466,432	22,332	1,488,764
Claren Road Credit Partners, LP - hedge funds	(295,299)	(4,497)	(299,796)
Cornwall Domestic, LP - hedge funds	2,089,470	31,821	2,121,291
Davidson Kempner Institutional Partners, LP - hedge funds	969,812	14,769	984,581
DRI Capital LSRC & LSRC II - private equity	824,445	12,555	837,000
EIG Energy Fund XIV, LP - real estate	632,785	9,637	642,422
EIG Energy Fund XV, LP - private equity	758,569	11,552	770,121
Elliott International, Ltd. - hedge funds	3,443,439	52,440	3,495,879
Eminence Fund, Ltd. - hedge funds	1,352,998	20,605	1,373,603
Empyrean Capital Fund, LP - hedge funds	1,066,122	16,236	1,082,358
Eton Park Fund, LP - hedge funds	380,540	5,795	386,335
Farallon Capital Institutional Partners, LP - hedge funds	36,093	550	36,643
Garnet Sky Investors Company, Ltd. - timber	2,340,981	35,651	2,376,632
Gateway Energy & Resource Holdings, LLC - real estate	110,966	1,690	112,656
Glenview Institutional Partners & Glenview Capital Opportunity Fund, LP - hedge funds	3,225,776	49,125	3,274,901
Global Forest Partners GTI7 Institutional Investors Co., Ltd. - timber	597,497	9,099	606,596
Harvest Fund Advisors - real estate	1,319,344	20,092	1,339,436
HBK Offshore Fund, Ltd. - hedge funds	1,659,539	25,273	1,684,812
JLL Partners V & VI, LP - private equity	3,433,682	52,292	3,485,974
King Street Capital, LP - hedge funds	48,279	735	49,014
Linden Capital Partners II - private equity	264,501	4,028	268,529
Mast Credit Opportunities I, LP - hedge funds	2,955,906	45,016	3,000,922
Merit Energy Partners F-II, LP - real estate	113,259	1,725	114,984
MHR Institutional Partners IIA, III & IV LP - private debt	481,073	7,326	488,399

Schedule of Investment Expenses continued on page 58

Schedule of Investment Expenses continued from page 57

Investing activity	MSEP	Judicial Plan	Total
Millennium Technology Partners II, LP - private equity	985,266	15,005	1,000,271
MOSERS Inc. - hedge funds	14	0	14
New Mountain Partners III, LP - private equity	272,221	4,146	276,367
NISA Investment Advisors, LLC - beta-balanced	4,428,526	67,442	4,495,968
OCM Real Estate Opportunities Fund III, LP - real estate	157,996	2,406	160,402
OCM Opportunities Fund IV B, VII & VIII B, LP - private debt	(46,829)	(713)	(47,542)
OCM/GFI Power Opportunities Fund II & III, LP - private equity	98,041	1,493	99,534
Perry Capital - hedge funds	627	10	637
Pharo Macro Fund, Ltd. - hedge funds	3,204,999	48,809	3,253,808
Resource Management Service Wildwood Timberlands, LLC - timber	362,363	5,518	367,881
Silchester International Investors - int'l developed equity	4,254,702	64,795	4,319,497
Silver Lake Partners II, LP - private equity	970,361	14,778	985,139
Silver Point Capital Fund, LP - alpha pool	(33,151)	(505)	(33,656)
SIR Hedged Equity Fund, Ltd. - hedge funds	3,395,236	51,706	3,446,942
SIRIS Partners II, LP - private equity	295,700	4,503	300,203
State Street Global Advisors - emerging markets	220,860	3,363	224,223
StepStone Capital Buyout Fund I & II, LP - private equity	219,598	3,344	222,942
StepStone Opportunities Fund II, LP - private equity	38,320	584	38,904
Stone Harbor Investment Partners, LP - emerging markets	331,156	5,043	336,199
TPG - Axon Partners (Offshore), Ltd. - hedge funds	533,888	8,131	542,019
The Veritas Capital Fund III & IV, LP - private equity	1,910,472	29,095	1,939,567
Viking Global Equities III, Ltd. - domestic equity	6,595,772	100,447	6,696,219
Visium Balanced Fund, LP - hedge funds	5,185,098	78,962	5,264,060
Total investment management fees	116,252,349	1,770,409	118,022,758
Other investment fees			
Investment consultant fees			
Summit Strategies, Inc.	886,570	13,502	900,072
TimberLink Consulting	36,937	563	37,500
Investment custodial fees			
BNY Mellon	344,128	5,241	349,369
Performance and risk measurement fees			
Barclays	9,850	150	10,000
Barra, LLC	197,000	3,000	200,000
BNY Mellon	252,005	3,838	255,843
Internal investment activity expenses	4,274,266	65,093	4,339,359
Total investing activity expenses	122,253,106	1,861,795	124,114,901
Securities lending activity			
Securities lending borrower rebates	(217,094)	(3,306)	(220,400)
Securities lending management fees			
BNY Mellon	123,125	1,875	125,000
Deutche Bank	26,399	402	26,801
Total securities lending activity expenses	(67,570)	(1,029)	(68,599)
Total investment expenses	$122,185,533	$1,860,769	$124,046,302

ADDITIONAL FINANCIAL INFORMATION

Pension Trust Funds

Schedules of Internal Investment Activity Expenses | Year Ended June 30, 2015

	MSEP	Judicial Plan	Total
Personnel services			
Salaries	$2,848,813	$43,385	$2,892,198
Fringe benefits	912,630	13,898	926,528
Total personnel services	3,761,443	57,283	3,818,726
Professional services			
Attorney services	21,153	322	21,475
Total professional services	21,153	322	21,475
Communications			
Telephone	13,726	209	13,935
Total communications	13,726	209	13,935
Facilities			
Utilities	2,463	38	2,501
Lease expense	56,022	853	56,875
Depreciation	34,962	532	35,494
Facility maintenance	9,349	142	9,491
Vehicle maintenance and operation	107	2	109
Total facilities	102,903	1,567	104,470
Software and equipment			
Computer supplies and software	3,055	47	3,102
Depreciation	9,719	148	9,867
Total software and equipment	12,774	195	12,969
Education, meetings and travel			
Professional development including travel	20,490	312	20,802
Due diligence travel	66,589	1,014	67,603
Total travel and meetings	87,079	1,326	88,405
General administrative			
Research and information services	251,057	3,824	254,881
Membership dues	13,228	201	13,429
Office supplies	1,874	29	1,903
Periodicals and publications	8,753	133	8,886
Miscellaneous expense	276	4	280
Total general	275,188	4,191	279,379
Total administrative expenses	$4,274,266	$65,093	$4,339,359

Pension Trust Funds

Schedules of Administrative Expenses | Year Ended June 30, 2015

	MSEP	Judicial Plan	Total
Personnel services			
Salaries	$3,985,890	$ 60,701	$4,046,591
Fringe benefits	1,635,239	24,903	1,660,142
Total personnel services	5,621,129	85,604	5,706,733
Professional services			
Actuarial services	215,106	3,276	218,382
Attorney services	121,351	1,848	123,199
Auditing services	69,438	1,057	70,495
Banking services	34,373	523	34,896
Consulting services	228,246	3,478	231,724
Total professional services	668,514	10,182	678,696
Communications			
Video production	1,454	22	1,476
Telephone	58,104	885	58,989
Printing	54,600	831	55,431
Postage and mailing	200,410	3,052	203,462
Total communications	314,568	4,790	319,358
Facilities			
Depreciation	109,892	1,674	111,566
Utilities	54,991	837	55,828
Facility maintenance	52,844	805	53,649
Vehicle maintenance	6,696	102	6,798
Total facilities	224,423	3,418	227,841
Software and equipment			
Computer supplies and software	93,225	1,420	94,645
Depreciation	132,607	2,019	134,626
Maintenance agreements	231,890	3,531	235,421
Equipment rental	80,376	1,224	81,600
Loss on sale of equipment	(4,604)	(70)	(4,674)
Total equipment	533,494	8,124	541,618
Education, meetings and travel			
Board travel and meetings	24,081	367	24,448
Professional development including travel	94,577	1,440	96,017
MOSERS sponsored seminars	85,710	1,305	87,015
Due diligence travel	3,025	46	3,071
Tuition reimbursement	11,198	171	11,369
Total education, meetings and travel	218,591	3,329	221,920
General administrative			
Advertising	95,747	1,458	97,205
Research and information services	88,915	1,354	90,269
Insurance	146,109	2,225	148,334
Membership dues	43,764	666	44,430
Business continuity	47,208	719	47,927
Office supplies	8,510	130	8,640
Periodicals and publications	66,259	1,009	67,268
Miscellaneous	461	7	468
Total general	496,973	7,568	504,541
Total administrative expenses	$8,077,692	$123,015	$8,200,707

ADDITIONAL FINANCIAL INFORMATION

Internal Service Funds

Schedules of Administrative Expenses | Year Ended June 30, 2015

	Life and LTD	Deferred Compensation	Total
Personnel services			
Salaries	$278,810	$258,177	$536,987
Employee fringe benefits	113,537	102,172	215,709
Total personnel services	392,347	360,349	752,696
Professional services			
Attorney services	0	3,288	3,288
Auditing services	4,630	35,500	40,130
Banking services	674	0	674
Total professional services	5,304	38,788	44,092
Communications			
Postage and mailing	14,018	16	14,034
Telephone	3,971	672	4,643
Printing	3,819	0	3,819
Video production expense	79	133	212
Total communications	21,887	821	22,708
Facilities			
Building use charge	20,407	0	20,407
Utilities	3,847	0	3,847
Maintenance	4,042	0	4,042
Total facilities	28,296	0	28,296
Software and equipment			
Computer supplies and equipment	6,518	599	7,117
Depreciation	0	2,658	2,658
Equipment maintenance	15,542	0	15,542
Equipment rental	5,563	0	5,563
Total software and equipment	27,623	3,257	30,880
Education, meetings and travel			
Board travel and meetings	1,684	0	1,684
Professional development including travel	7,033	11,144	18,177
MOSERS sponsored seminars	5,655	0	5,655
Due diligence travel	212	5,320	5,532
Total education, meetings and travel	14,584	16,464	31,048
General administrative			
Advertising	6,687	8,226	14,913
Research and information services	6,219	14,632	20,851
Insurance	2,299	0	2,299
Membership dues	3,008	1,374	4,382
Business continuity	4,635	0	4,635
Office supplies	3,302	134	3,436
Periodicals and publications	559	0	559
Miscellaneous	32	0	32
Total general	26,741	24,366	51,107
Total administrative expenses	$516,782	$444,045	$960,827

Schedules of Professional/Consultant Fees | Year Ended June 30, 2015

		Pension Trust Funds			Internal Service Funds		
Professional/Consultant	Nature of Service	MSEP	Judicial Plan	Total	Life and LTD	Deferred Compensation	Total
Operation administrative expenses							
Avtex Solutions, Inc.	Information technology consulting	$ 12,312	$ 188	$ 12,500	$ 0	$ 0	$ 0
Central Bank	Banking	32,814	500	33,314	508	0	508
Charlesworth & Associates	Risk management consulting	7,831	119	7,950	0	0	0
Collector Solutions, Inc	Banking	1,558	24	1,582	166	0	166
Gabriel, Roeder, Smith & Co.	Actuarial	215,106	3,276	218,382	0	0	0
Gamble & Schlemeier, LTD	Governmental consulting	24,625	375	25,000	0	0	0
Huber & Associates	Information technology consulting	4,754	72	4,826	0	0	0
Nexum, Inc.	Information technology consulting	95,693	1,457	97,150	0	0	0
Orion	Strategic planning consulting	23,147	353	23,500	0	0	0
Steptoe & Johnson, LLP	Legal counsel	11,951	182	12,133	0	0	0
Thompson Coburn, LLP	Legal counsel	108,415	1,651	110,066	0	3,288	3,288
U.S. Treasury	IRS audit	985	15	1,000	0	0	0
VR Election Services	Board election services	59,886	912	60,798	0	0	0
Williams-Keepers, LLC	Financial audit	69,437	1,058	70,495	4,630	35,500	40,130
Operation administrative expenses subtotal		668,514	10,182	678,696	5,304	38,788	44,092
Internal investment administrative expenses							
CT Corporation	Legal counsel	639	10	649	0	0	0
Purrington Moody Weil, LLP	Trading consultation	4,821	73	4,894	0	0	0
Thompson Coburn, LLP	Legal counsel	15,693	239	15,932	0	0	0
Internal investment administrative expenses subtotal		21,153	322	21,475	0	0	0
Total professional/consultant fees		$689,667	$10,504	$700,171	$5,304	$38,788	$44,092

Information on investment management and consulting fees can be found in the *Schedule of Investment Expenses* on pages 57-58.

ADDITIONAL FINANCIAL INFORMATION

Pension Trust Funds

Investment Summary | Year Ended June 30, 2015

	June 30, 2014				June 30, 2015		
Type of Investment	Cost Value	Fair Value	Purchases and Capital Additions at Cost	Sales and Redemptions at Cost	Cost Value	Fair Value	Percent of Total Fair Value
Fixed income							
Treasury bonds, notes, and bills	$2,649,585,045	$2,668,044,546	$1,543,645,541	$(28,644,908)	$4,164,585,678	$4,109,906,639	40%
Gov. bonds and govt. mortgage-backed securities	50,888,241	48,204,492	6,439,658	(4,094,361)	53,233,538	43,001,590	1
Corporate bonds	1,237,387	971,429	0	(29,917)	1,207,470	847,433	0
Convertible bonds	0	0	0	0	0	0	0
Collateralized mortgage obligations	1	1	0	(1)	0	0	0
International corporate bonds	6,134,032	5,020,362	913,348	(1,264,938)	5,782,442	3,964,906	0
Bank loans	555,751	0	0	0	555,751	98	0
Total fixed income	2,708,400,457	2,722,240,830	1,550,998,547	(34,034,125)	4,225,364,879	4,157,720,666	41
Common stock	357,090,108	445,760,145	39,871,559	(22,304,820)	374,656,847	415,247,698	4
International investments							
International equities	179,083,382	857,714,950	1,503,050	(2,566,751)	178,019,681	858,319,652	8
Foreign currency	1,031,891	59,809	5,235,738	(6,184,228)	83,401	(2,687)	0
Total international investments	180,115,273	857,774,759	6,738,788	(8,750,979)	178,103,082	858,316,965	8
Real estate investment trust	3,617	9,986	0	0	3,617	10,056	0
Venture capital limited partnerships	3,558,269,153	5,182,634,926	324,991,709	(684,269,182)	3,198,991,680	4,827,465,957	47
Investments *(per Statements of Fiduciary Net Position page 26)*	6,803,878,608	9,208,420,646	1,922,600,603	(749,359,106)	7,977,120,105	10,258,761,342	100%
Short-term investments							
Short-term investment funds	2,247,013,704	2,247,013,705	1,250,420,664	(1,260,127,477)	2,237,306,891	2,237,306,892	
Repurchase agreements	10,418,820	10,418,820	2,638,232,128	(2,636,497,920)	12,153,028	12,153,028	
Total short-term investments	2,257,432,524	2,257,432,525	3,888,652,792	(3,896,625,397)	2,249,459,919	2,249,459,920	
Invested securities lending collateral							
Corporate bonds	1,748,588	749,463	0	(909,232)	839,357	149,065	
Short-term investment funds	35,446,552	35,446,551	503,455,734	(519,823,300)	19,078,986	19,078,986	
Total invested securities lending collateral	37,195,140	36,196,014	647,987,376	(665,264,175)	19,918,342	19,228,051	
Total investments	$9,098,506,272	$11,502,049,185	$6,459,240,771	$(5,311,248,678)	$10,246,498,366	$12,527,449,313	

Internal Service Funds

Investment Summary | Year Ended June 30, 2015

	June 30, 2014				June 30, 2015		
Type of Investment	Cost Value	Fair Value	Purchases and Capital Additions at Cost	Sales and Redemptions at Cost	Cost Value	Fair Value	Percent of Total Fair Value
Repurchase agreements	$4,225,655	$4,225,655	$1,152,932,809	$(1,152,676,381)	$4,482,083	$4,482,083	100%

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review as an appendix to this report at the MOSERS office.

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MOSERS makes decisions based on the best interests of members, even if that decision is not always the “easiest.” This core business practice, to “Exceed Customer Expectations” is the philosophy that drives every decision.

— Barbara Beermann, Retired Senior Educator

Years of Service: 2000 - 2015

Investment Section

★ ★ ★ ★ ★

Every business day, of every month, of every year, there are people working to ensure that I have financial security for the rest of my life. The staff of the Missouri State Employees' Retirement System (MOSERS) is dedicated to providing outstanding customer service and investment performance for every state of Missouri employee and retiree, including me! The commitment to providing the best possible customer service and solid long-term investment performance is the very foundation of the work culture at MOSERS. "Excellence" is not a word on a motivational poster on the wall at MOSERS. Excellence is the basis for every task, each day, for each person working at MOSERS.

— Christine Gierer (Rackers), Retired Manager of Investment Policy & Communications
Years of Service: 2005 - 2014

Investment Section

Chief Investment Officer's Report

Missouri State Employees' Retirement System
Mailing Address: PO Box 209, Jefferson City, MO 65102-0209
Phone: (573) 632-6100 • (800) 827-1063 | Fax: (573) 632-6103
MO Relay: 7-1-1 (Voice) • (800) 735-2966 (TTY)
Website: *www.mosers.org* | Email: *mosers@mosers.org*
Visit us at 907 Wildwood Drive, Jefferson City, MO

MOSERS®
WE ARE HERE FOR YOUR BENEFIT.

October 16, 2015

Dear Members:

I am pleased to present the *Investment Section* of the MOSERS *Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2015.

The MOSERS portfolio generated a time-weighted rate of return based on fair market value of (2.64)% for the year ended June 30, 2015, net of all fees and expenses, ending a five-year string of positive performance. The result was well below the 8% assumed rate of return and, to make matters worse, underperformed our policy benchmark by (0.9)%, earning $84 million less than our benchmarks would have prescribed. To add insult to injury, this year represented our worst showing relative to other public funds across the country in my 21 year tenure as CIO. In a year when U.S. equity markets produced some of the highest returns among risky assets, and commodities the lowest, our decision in 2012 to move away from an equity-centric portfolio to a more risk-balanced portfolio was the primary driver of the poor peer comparison. Large short-term variances versus our peers were expected to become more common place in the new portfolio structure, however, that does little to remove our disappointment in the FY15 results.

The longer-term story (in spite of FY15) continues to be compelling and exemplifies our patience, fortitude, and willingness to lean against the wind – all qualities which are cornerstones of our success over the years. Contrarian investing is easy to talk about, yet very difficult to adhere to during periods of capital loss. Case in point, over the last 12 months we witnessed a decline of over 35% in our commodity portfolio, driven largely by a decline in oil which was down over 50%. Today, psychology in the oil market – and commodities more broadly – is decidedly negative. Very few analysts or investors see any relief in sight from the large and persistent oversupply currently being calculated by the International Energy Agency (IEA). In their most recent report, the IEA estimates global supply exceeding demand by 3.3 million barrels per day. Explanations abound as to why the world is so currently oversupplied. Saudi Arabia – and OPEC more broadly – have refused to cut production in the face of slowing demand from large consumers like China. These middle-eastern (low-cost) producers seem willing to accept lower prices in the short term in order to maintain market share, believing ultimately that lower prices will drive the higher-cost, marginal producers (U.S. shale industry) out of business. Once the competition is gone, their market share goes up and they then can begin to cut production and benefit as prices return to normal. Other negative sentiment currently includes the belief that Iran is prepared to dump oil into the market following the successful negotiation of its nuclear deal and a lifting of economic sanctions.

Whether you're an investor like MOSERS (who owns oil and other commodities in a balanced portfolio as a hedge against unexpected inflation) or a speculator who day trades oil with the intent of making a quick buck, the gut-wrenching feeling caused by the current market climate is unpleasant. Human nature is to make that feeling stop. The most immediate way to do that is to sell. When the selling reaches a crescendo, our industry speaks of it in terms of capitulation. Capitulation is followed by the beginning of a new cycle in which prices rise from a very low base and outsized returns are realized. As contrarian investors, we seek to identify periods of capitulation and become buyers. This is scary stuff not for the faint of heart and, to make matters worse, it very seldom seems to work in the short-term. In other words, we invariably buy too soon. However, for investors like us – willing to provide capital (buy) during those very scary times – the odds of being rewarded are stacked in our favor over a three- to five-year period. We simply need the wherewithal (liquidity) and fortitude (belief) to stay the course. Today, the oil market appears to us to be in the final stages of a market selloff. We are confident that five years from now we will look back to mid-2015 and see that our willingness to buy oil at $40 and $50 per barrel was a no-brainer, even though, for those of us who lived through it, we will remember just how hard it really was.

While the decline in oil was easy to recognize, what was not discussed enough was that the intermediate and long end of the treasury-bond curve hit all-time lows – even lower than those seen during the financial crisis. While bond yields rebounded into fiscal year end, the fact that we experienced a historic low in bond yields was indicative of a trend toward lower levels of inflation. Low inflation and a relatively strong outlook for U.S. growth pushed the dollar appreciably higher. The dollar appreciated 20% against a basket of our trading partners, 19% against the euro, and 17% against the Japanese yen. The appreciation in the dollar caused our international equities, in dollar terms, to print negative returns. The offset to that loss was our domestic equity positions, which allowed the overall equity position to produce below average, yet positive, results. When viewed through the risk-balanced lens of our portfolio, we had equal risk weights to two assets that produced slightly above average returns (nominal bonds and alternative betas), two assets that produced below average results (equities and TIPS), and one asset that generated significantly negative results (commodities). Given this set of events, we are not surprised by an overall portfolio return that's slightly negative. While it is easy to look in the rear-view mirror and wish we had "done it differently" because our results could have been a little better, we feel like our portfolio structure will win over the long term as equity volatility returns to its rightful place among risky assets.

Our Future – Poised for Success

Twenty-one years ago, I first reported to you as the MOSERS CIO. There was a picture on the top, right-hand corner of that letter, written October 1, 1995, of a plump-faced kid with a lot of hair. A recent photo would indeed disprove the old adage "the more things change, the more they stay the same." While *that* change has not necessarily been for the better, fortunately the changes we have made at MOSERS through the years have served us well. Most recently, in July 2012, MOSERS embarked on a major change in portfolio management philosophy: moving from a world where capital was allocated based on expected returns to one where capital is allocated based on risk and economic balance. We recognized at the time that this effort would take us down a very different and possibly lonely path. The concepts we endorsed were not new to the industry, however, our willingness to embrace the concepts at the portfolio level placed us in very small company. Our ability as an organization to take this step was the culmination of a two-decade-long evolution at MOSERS involving an increased focus on internal investment expertise (circa 1995 – present), improved governance processes (circa 1998), better diversification among equity surrogates (circa 2001-2002), introduction of plan-level leverage through a portable alpha program (circa 2004), and process improvements made as a result of some difficult experiences associated with the financial crisis (circa 2008-2009).

All of these evolutionary moments prepared us to think in an unconstrained way about whether total plan risk balancing was a superior portfolio management approach. We concluded, in an unpressured, intellectually honest way, that for MOSERS it was. We collectively made this decision, fully aware that the "true" risk of the strategy was not in the results it would produce over time, but in the pressures that would ensue should the strategy produce inferior results in the short-term versus the traditional equity-centric approach. Three years into our effort, we are currently living through one of those pressure tests as our risk-balanced approach has underperformed our equity-centric peers. These moments in time are tough for everybody involved in the program, however, be assured that our board, new executive director, and external advisers stand united that the decision to pursue a risk-weighted portfolio was the right one for the continued long-term success of the retirement system.

I will be stepping down as the MOSERS CIO in the first half of 2016. For the past 21 years, it has been an honor and a privilege to serve the board, executive director Gary Findlay, and most importantly you, the members. I could never have imagined when I became CIO in 1995 that I would be at MOSERS for the better part of my working life. The rewards, challenges, and fun that I have had is a testament to the great organization that is MOSERS. I want to express my profound confidence in the 21-person-strong investment team (led by CIO-elect, Seth Kelly, and deputy CIO, Shannon Davidson) that will be here to carry on once I leave. This is a world-class group of people with the intellect, desire and humility to see that the MOSERS investment program continues to be an industry leader well into the future.

Thank you for the opportunity to play a role in your financial security. It has been a wonderful ride.

Best Regards,

Rick Dahl

Rick Dahl
Chief Investment Officer

Investment Consultant's Report

Summit Strategies Group

October 16, 2015

The Board of Trustees
Missouri State Employees Retirement System
907 Wildwood Drive
Jefferson City, MO 65109

Dear Board Members:

Every year I begin the process of writing this letter by 1) asking what the theme of this year's CAFR is, and then 2) going back and reading what I wrote last year. The theme gets me thinking about what I'm going to say each year. Reading last year's letter is purely defensive; it tells me if I need to apologize for any statement made last year that this year's markets have made sound completely ridiculous.

I must admit this year's theme gave me pause: "The Pursuit of Excellence Never Retires," accompanied by profiles on longstanding MOSERS' staff members who are retiring this year. This wave of "retirees" at MOSERS is made up of the folks I've had the pleasure of working with for the past 20+ years. Two decades ago these were the new guys, with new ideas and new energy and I have truly enjoyed working with these dedicated professionals. I've learned a lot and admire their accomplishments and their attainment of excellence in the public sector. It is well deserved that they leave with their heads held high and a testament to their commitment that they turn over this very successful system to its next generation of leaders.

They're retiring, making plans and charting life's next course. Meanwhile, I've had initial conversations with MOSERS' new executive director, John Watson, and extensive discussions with CIO-elect, Seth Kelly, about their visions of the future for MOSERS. New faces, new energy, and new ideas, but also the same work ethic and commitment to the ongoing excellence of the system for the members and the state. This continues to be an enriching environment to be around.

In terms of markets and the portfolio's progress in the past year, I boldly predicted in last year's letter that the six years of wonderfully generous, non-volatile returns following the 2008 Global Crash could not last forever. For even the most casual observer of investing, this is the easiest prediction one will ever make. Markets go up and markets go down; this is not a prediction, it is a FACT. The only thing CNBC, the *Wall Street Journal* or I can debate or "forecast" is when and by how much.

In this particular market cycle, the "when" of market reversal has been 2015 and the "how much" is fairly modest by historical standards (so far). The MOSERS one-year result is (2.64)%, while the five-year number is 9.6% and the ten-year return is 7.0% (both annualized). By contrast, one year ago my letter reported same period returns of 19.2%, 13.2% and 8.6%, respectively. What a difference a year makes, although you can probably make that statement most years. Such is the nature of investing.

In some ways, we've thought the current market environment might have happened several years ago. We've had the same concerns for several years now and it seems the market paid no heed. Six straight up years for U.S. equities made investors feel real good about themselves and their portfolios. Unfortunately, the global economy has not been so robust, and 2015 has been the year where the market has "awakened" to this fact. Too much debt in the world was the base cause of the financial crisis of 2008-2009. Seven years after the crisis the total debt burden globally is about the same as it was, so it hasn't improved. For years, Central Banks globally have been dropping interest rates to 0% followed by printing the dollar, pound,

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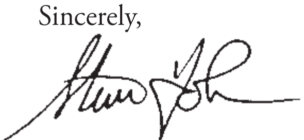
yen, and euros (and now Chinese yuan), in hopes that these actions will allow economies to "buy time" and get back to growth. Growth solves all indebtedness worries. Unless the growth engine sputters or does not fire at all. This is the idea with which the markets of 2015 are wrestling.

Globally, investors in need of a return (like a pension fund) are really struggling to see where these future returns are going to come from. Some are dropping assumptions on future investment return. Some are piling into leveraged partnership deals in private equity, venture capital and real assets, as examples, in hopes that these vehicles will deliver outsized returns versus the capital markets. MOSERS has been unique among pension plans in adopting a "beta-balanced" approach, where the most efficient multi-asset class portfolio has been constructed and then levered to give the highest probability of achieving the required return. In the opinion of Summit and the MOSERS investment staff, this is the most intellectually honest way of prudently pursuing the realization of our return objectives in a very challenging global economic environment.

Interestingly, many market professionals agree that a "beta-balanced" approach is the most efficient way to earn returns, yet the primary reason for not pursing the course MOSERS has taken is "it's different." It *is* different! It will lead to results in any short period of time that are quite different from the guy's down the block, and, if it leads to better strength of the system 10- and 20-years down the road, it's a price worth paying in the short run. I believe this long-term thinking and the willingness to exchange short-term uneasiness for long-term success should be applauded and admired.

Thanks again for allowing Summit to serve this impressive system. MOSERS' ability to smoothly transition from one generation of leaders to the next is yet one more example of its commitment to the pursuit of excellence.

Sincerely,



Stephen P. Holmes, CFA

President

Investment Policy Summary

Guiding Principles

Critical to the financial security of present and future benefit recipients is the effectiveness and efficiency of the system's asset management program. The MOSERS Board of Trustees, charged with the responsibility for investing the assets of the system in a manner consistent with fiduciary standards set forth in the prudent person rule, has adopted the following fundamental principles to guide all investment-related decisions:

- Preserve the long-term corpus of the fund.
- Maximize total return within prudent risk parameters.
- Act in the exclusive interest of the system's members.

The investment policy summary serves as a reference point for management of system assets and outlines MOSERS' investment philosophy and practices. Investments within this report are presented on the basis of fair market value using a variety of sources such as appraisals, valuations of underlying companies and assets for limited partnerships and commingled funds, and through fair market values obtained from the investment custodian.

Investment Objective

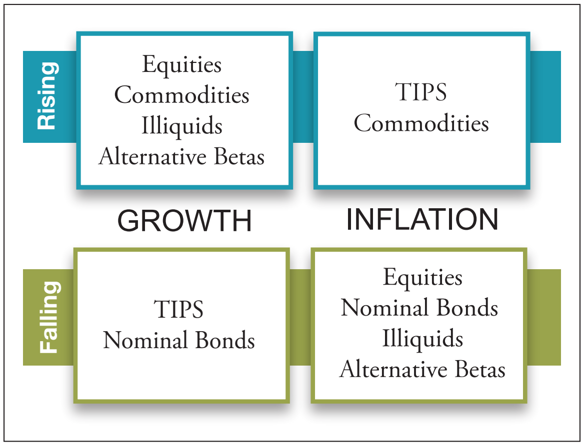
In keeping with the three guiding principles, the board has adopted the following broad investment objectives:

- Develop a real return objective (RRO) that will keep contribution rates reasonably level over long periods of time, absent changes in actuarial assumptions.
- Establish a risk-balanced allocation policy that is expected to meet the RRO over long periods of time, while minimizing the impact of the fund's volatility on the contribution rate.
- Maximize the return per unit of cost of the investment program through the efficient use of internal and external resources.

Investment Beliefs

MOSERS' internal investment staff and external general asset consultant have arrived at investment beliefs, which are the foundation for implementation of the investment portfolio to achieve the board's objectives. These beliefs guide every decision made within MOSERS' portfolio. They are the fundamental concepts underlying the MOSERS investment program. These beliefs are:

Economic Environments



- **Portfolio construction should focus first on the allocation and balancing of risk; it is the allocation of risk that drives portfolio returns.** While investment returns receive a lot of public attention, understanding and balancing risk across asset classes improves the consistency of returns for a given level of risk and thus provides more stability in the contribution rate for the employer. Returns are the end product, where risks are the ingredients.
- **Diversification is critical because the future is unknown.** Reliable diversification requires a fundamental understanding of the economic drivers of risk and return. MOSERS' policy portfolio has been built upon the premise that very little is known about what the future holds. Therefore, it is rational to construct a portfolio that is believed to combat various economic conditions. The illustration above right reflects various economic environments and the types of investments that should be expected to perform well in those environments.
- **Every investment should be examined in the context of its potential return from beta (market return) and alpha (value added return); while separation is not always possible, every effort should be made to distinguish the two distinct return components.** Beta is the return which is expected to be earned by investing passively within a specific asset class or compensated risk premium. Exposures to beta can be purchased cheaply, and over long periods of time, the beta return should be positive and coincide with the risk associated with a given asset class. In contrast, alpha is the return generated through a manager's ability to select particular investments that perform better than the asset class as a whole. Alpha is a zero-sum game.

- **Regardless of the source of the return, it is important to construct the portfolio based on a conscious decision to include a certain amount of beta exposure in the portfolio and a certain amount of alpha exposure.** By consciously selecting this balance within the portfolio, staff is better able to manage the risks of the portfolio while ensuring the RRO is achieved.
- **Flexibility to opportunistically alter the portfolio away from risk-balanced when markets are driven to extremes as a result of short-term economic cycles is an important portfolio management tool.** As a result of the cyclical nature of the economy, asset classes or investment strategies may be more or less attractive relative to others in given time frames, thus marginal flexibility in the allocation policy provides the system with the opportunity to capitalize on this within prudent risk constraints. Under circumstances where the valuations of a particular asset class are compelling, it may make sense to modify the portfolio's allocation at the margins in order to capitalize on attractively valued opportunities without exposing the fund to additional risk.

Roles and Responsibilities

Board of Trustees

The board of trustees bears the ultimate fiduciary responsibility for the investment of system assets. Members of the board must adhere to state law and prudent standards of diligence with respect to their duties as investment fiduciaries. Accordingly, they are required to discharge their duties in the interest of plan participants. They must also "act with the same care, skill, prudence, and diligence under prevailing circumstances that a prudent person, acting in a similar capacity and familiar with those matters, would use in the conduct of a similar enterprise with similar aims."[1] Specifically related to investments, the board is charged with the duties of establishing and maintaining broad policies and objectives for the investment program along with the recommendations of staff and the external asset consultants.

Executive Director

The executive director is appointed by and serves at the pleasure of the board. The board has given the executive director broad authority for planning, organizing, and administering the operations and investments of the system under broad policy guidance from the board. Specifically with regard to investments, the executive director is broadly responsible for the oversight of the investment program. The executive director must ensure that system assets are invested in accordance with the board's policies and that internal controls are in place to safeguard system assets. The executive director must also certify that all manager hiring and termination decisions were made in accordance with the board's governance policy. In addition, the executive director certifies strategic allocation decisions were made in accordance with the governance policy.

Chief Investment Officer and Internal Staff

The CIO serves at the pleasure of the executive director, yet has a direct line of communication with the board on investment-related issues. The CIO has primary responsibility for the overall direction of the investment program. The CIO works with the external asset consultants and executive director in advising the board on policies related to the investment program. The CIO has primary responsibility to make hiring and termination decisions related to money managers with the approval of the external general asset consultant. The CIO is also responsible for making strategic allocation decisions with the approval of the external general asset consultant. Other responsibilities of the CIO include monitoring the investment of system assets, oversight of external money managers and the internally managed portfolios, and keeping the board apprised of situations which merit their attention. The internal investment staff is accountable to the CIO.

External Asset Consultants

Summit Strategies Group of St. Louis, Missouri serves as the system's external general asset consultant and at the pleasure of the board. The primary duties of the external general asset consultant are to:

- Advise the board on policies related to the investment program.
- Provide a third-party perspective and level of oversight to the system's investment program.

The external general asset consultant must approve all manager hiring and termination decisions and strategic allocation decisions made by the CIO. The external general asset consultant provides advice and input to the CIO and internal investment staff on investment-related issues and money manager searches.

Blackstone Alternative Asset Management serves as the system's external hedge fund consultant at the pleasure of the board. The primary duties of the external hedge fund consultant are to:

- Advise the board on policies related to the hedge fund program.
- Provide a third-party perspective and level of oversight to the system's hedge fund investment program.

[1] Section 105.688, RSMo - Investment Fiduciaries, Duties.

The external hedge fund consultant must approve all hedge fund manager hiring and termination decisions. The external hedge fund consultant provides advice and input to the CIO and internal investment staff on hedge fund program issues and manager searches.

Chief Auditor

The chief auditor reports directly to the executive director and if, in the opinion of the chief auditor circumstances warrant, may report directly to the board. The chief auditor is independent of the system's investment operations and, among other things, is responsible for providing objective audit and review services for the investment operations. It is the chief auditor's objective to promote adequate and effective internal controls at a reasonable cost, which results in suggested improvements that will lead to economies and efficiencies in the system's investment operations.

Master Custodian

Bank of New York Mellon serves as the master custodian of the system's assets except in cases where investments are held in partnerships, commingled accounts, or unique asset classes where it is impossible for them to do so. The master custodian is responsible for maintaining the official book of records, providing performance reports, and serving as an additional layer of risk control in the safekeeping of system assets.

Asset Allocation

Determining the system's asset allocation is regarded as one of the most important decisions in the investment management process. The board, with advice from staff and the external general asset consultant, has developed a risk-weighted policy allocation that is designed to achieve the long-term required return objectives of the system, given certain risk constraints. The current allocation reflects the need for a diversified portfolio, which will perform well in a variety of economic conditions and will help reduce the portfolio's overall volatility. In determining the optimum mix of assets, the board considers five factors:

- The expected risk of each asset class.
- The expected rate of return for each asset class.
- The correlation between the rates of return of the asset classes.
- The investment objectives and risk constraints of the fund.
- The impact of the portfolio's volatility on the contribution rate.

While the board maintains a set policy allocation mix, they have taken steps to provide flexibility by granting authority to the CIO, with the approval of the external general asset consultants and certification of the executive director, to make strategic allocation decisions to capitalize on attractively valued opportunities within prudent risk constraints. This flexibility has allowed the system to take advantage of changing market conditions. The table below illustrates the policy asset allocation and ranges formally adopted by the board as of June 30, 2012.

Asset Allocation

Beta-Balanced Portfolio (80% of total capital)	Risk Allocation Policy	Risk Allocation Ranges[1]	Benchmark Index (weight)[2]	Illiquids Portfolio[6] (20% of total capital)	Benchmark Index (weight)
Global equity	20%	13% - 27%	MSCI ACWI[3] - (19%)	Growth sensitive	S&P 500 + 3% (10%)
Nominal bonds	20%	13% - 27%	Barclays Long Treasury - (37%)	Inflation sensitive	S&P 500 + 3% (10%)
Inflation-indexed bonds	20%	13% - 27%	Barclays 1-10 TIPS - (64%)		
Commodities	20%	13% - 27%	S&P GSCI[4] - (17%)		
Alternative betas	20%	13% - 27%	AQR DELTA[5] - (31%)		

[1] The board has granted the CIO the authority to alter the equal risk-weighted allocation policy. This authority exists within risk ranges as depicted in the table above. These risk ranges, like the policy allocation, are driven by the long-term volatility and correlation expectations for the five betas that make up the beta-balanced portfolio. The CIO will make these strategic allocation decisions away from the policy benchmark subject to consultation and agreement from the chief general asset consultant (CGAC).

[2] Benchmarks are net of MOSERS' actual leveraging costs on borrowed assets with the exception of the alternative beta benchmark which is net of management fees.

[3] Morgan Stanley Capital International All Country World Index (net dividends).

[4] S&P Goldman Sachs Commodity Index (formerly Goldman Sachs Commodity Index).

[5] A diversified risk-balanced portfolio of liquid hedge fund risk premia managed by AQR Capital net of management fees.

[6] Illiquids portfolio upper limit of 27.5% of capital, no new commitments past 23%.

Rebalancing

It is the responsibility of staff to ensure that the asset allocation adheres to the system's rebalancing policy. MOSERS utilizes a combination of cash market and exchange traded futures transactions to maintain the total fund's allocation at the broad policy level. Month end reviews are conducted to bring the portfolio back within allowable ranges of the broad policy targets.

Risk Controls

MOSERS' investment program faces numerous risks; however, the primary risk to MOSERS is that the assets will not support the liabilities over long periods of time. In order to control this risk and numerous other risks that face the system, the board has taken the following steps, on an ongoing basis, to help protect the system:

- Actuarial valuations are performed each year to ensure the system is on track to meet the funding objectives of the plan. In addition, every five years an external audit of the actuary is conducted to ensure that the assumptions being made and calculation methods being utilized are resulting in properly computed liabilities.
- Asset/liability studies are conducted at least once every five years. The purpose of these studies is to ensure that the current portfolio design is structured to meet the system's liabilities. During these studies, investment expectations are also reexamined in more detail.
- A governance policy, which incorporates investment limitations, is in place to ensure that board policies are clearly identified. Within these documents, desired outcomes are identified, responsibilities for individuals are identified in relation to particular areas of the portfolio's management, and details are provided for measuring outcomes. Reporting requirements are clearly identified to ensure appropriate checks and balances are in place. In addition, annual performance audits are conducted to ensure the performance measurement tools and methodologies being utilized are proper.

Performance Objectives and Monitoring Process

Generating returns net of expenses equaling the RRO of 5.5% plus inflation remains the primary performance objective for the total fund over the long term.

The reason for the long-term focus on this objective is to preclude the temptation to overreact to events in the marketplace that have no relevance in the management of the relationship between the system's assets and liabilities. The resulting dilemma is the conflicting need to evaluate investment policy implementation decisions over shorter time frames while maintaining the longer-term focus necessary to manage and measure the fund's performance relative to the RRO. To address this problem, the board evaluates performance relative to policy and strategy benchmarks. This helps to evaluate the board's broad policy decisions and the staff and external consultant's implementation decisions. Policy benchmarks measure broad investment opportunities of each sub-asset class in which MOSERS has chosen to invest. The strategy benchmarks represent decisions made by the CIO to strategically deviate from the policy asset allocation for each sub-asset class. The return of the strategy benchmarks are determined based upon the actual weight of the asset class multiplied by the appropriate benchmark.

The policy and strategy benchmarks are used in the following manner to evaluate board and staff decisions:

- **Board Decisions:** The value added through board policy decisions is measured by the difference between the total fund policy benchmark return and the RRO. This difference captures the value added by the board through their policy asset allocation decisions relative to the return necessary to fund the system's liabilities. A policy benchmark return greater than the RRO reflects value added through board decisions. A policy benchmark return less than the RRO reflects losses or shortfalls in performance in funding the liabilities. These policy decisions are measured over long periods of time.
- **CIO and External Consultants' Decisions:** There are two components to decisions made by the CIO and external consultants, which are monitored by the board on an ongoing basis. They are: 1) strategic allocation decisions, and 2) implementation decisions.

Strategy decisions are made by the CIO, with the approval of the external general asset consultant and the review of the executive director to deviate from the policy benchmark weight. The difference between the strategy benchmark return and the policy benchmark return captures the value added by the CIO through strategic decisions to overweight or underweight asset allocations relative to the board's policy allocation decisions. A strategy benchmark return greater than the policy benchmark return reflects value added through the sub-asset class allocation decisions. A strategy benchmark return less than the policy benchmark return reflects losses to the fund's performance based upon strategy decisions. Strategy decisions should be measured over all periods of time with majority weight placed on outcomes that have occurred over a market cycle.

Implementation decisions are money manager selection choices made by the CIO with the approval of the appropriate external consultant and the certification of the executive director that the decision was made in accordance with the board's adopted governance policy. The value added through these decisions is measured by the difference between the actual portfolio return and the strategy benchmark return. This difference captures the value added through these external manager selection decisions. An actual portfolio return greater than the strategy benchmark return reflects value added through these external manager selection decisions. An actual portfolio return less than the strategy benchmark return reflects losses to the fund's performance based upon implementation decisions. Implementation decisions should be measured over all periods of time with a majority weight placed on outcomes that have occurred over a market cycle.

The board reviews performance information on a quarterly basis to help ensure adequate monitoring of the fund's overall performance objectives.

★ ★ ★ ★ ★

I had the privilege of working for MOSERS and specifically for its Chief Investment Officer, Rick Dahl, for 18 years. Rick Dahl has displayed steadfast determination to achieving superior risk-adjusted investment returns for MOSERS. The measured results are clear proof of his and his staff's success. Rick sets extremely high standards for the professionalism of staff and sets expectations for external managers to deliver outstanding returns in a cost effective manner. He conducts business in every way with a calm but firm demeanor and always with a fair, respectful manner to his staff and external service providers.

As a retiree from two public pension funds, I see a stark quality difference "hands down" in favor of MOSERS both in terms of its investment management practices as well as in its administration of benefits.

— Jim Mullen, Retired Manager of Public Debt

Years of Service: 1995 - 2013

Total Fund Review

As of June 30, 2015, the MOSERS investment portfolio had a fair market value of $8.6 billion. The graph to the right illustrates the growth of MOSERS' portfolio since the system's inception.

Investment Performance

MOSERS' investments generated a time-weighted return of (2.64)%, net of fees, for FY15. The total fund return trailed the 1-year policy benchmark by (0.9)%, earning $84 million less than our benchmarks would have prescribed.

Investment Performance vs. the Required Rate of Return

The total fund investment return is compared to a required rate of return. The required rate of return is established by the board to determine how well the fund is performing over the long term in order to meet future plan obligations after accounting for inflation. The required rate of return for FY15 is equal to the RRO of 5.5% plus inflation. The best known measure of inflation is the Consumer Price Index (CPI).[2]

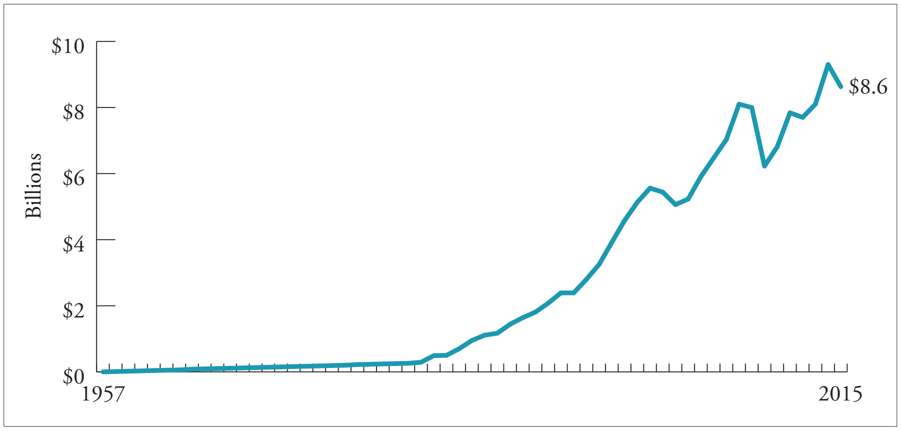
Given the randomness of the investment markets, the portfolio should not be expected to meet the required rate of return every year. A review of long periods of time is best to evaluate whether or not the total return has kept pace with the system's funding objectives.

As indicated in the center bar chart, MOSERS' investment returns exceeded the required rate of return by 1.3% over the 20-year period ended June 30, 2015.[3]

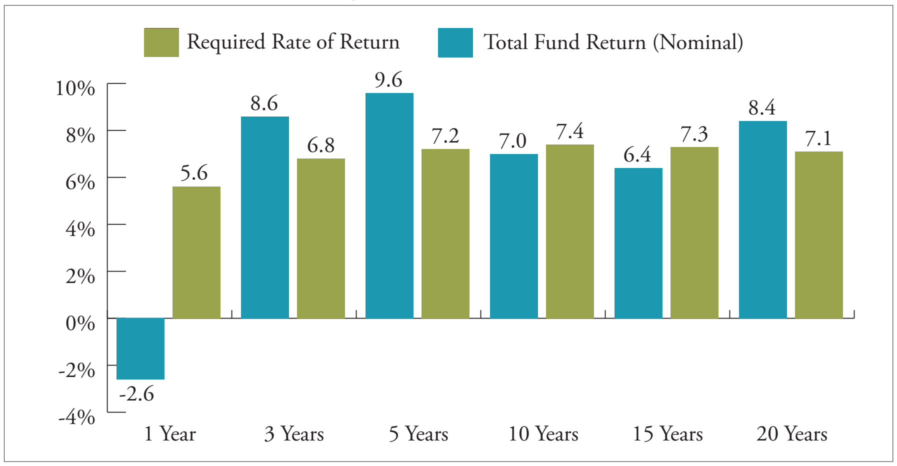
Investment Performance vs. Benchmark Comparisons

In addition to measuring performance relative to the required rate of return, the board also compares fund returns to the policy benchmark and the strategy benchmark. Returns for the total fund versus these benchmarks are displayed in the bar chart to the right.

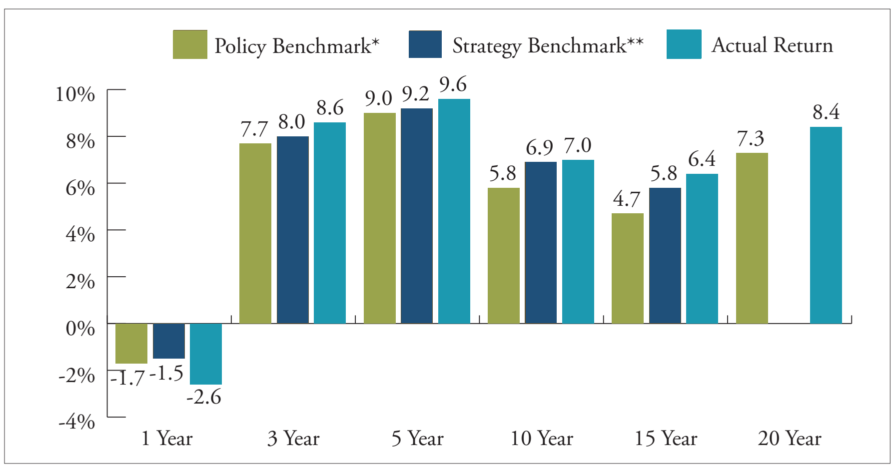
Total Fund Growth



Total Fund Actual Return vs. Required Rate of Return



Total Fund Actual Return vs. Benchmark Returns



* As of June 30, 2015, the policy benchmark was comprised of the following components: 80% total beta-balanced policy benchmark and 20% total illiquids portfolio policy benchmark.

** As of June 30, 2015, the strategy benchmark was comprised of the following components: 78.0% total beta-balanced strategy benchmark and 22.0% total illiquids portfolio policy benchmark. A strategy benchmark for the 20-year period is not available.

[2] CPI Source: United States Department of Labor, Bureau of Labor Statistics (not seasonally adjusted).

[3] Performance returns are calculated using a time-weighted rate of return on fair market values.

The policy benchmark provides an indication of the returns that could have been achieved (excluding transaction costs) by a portfolio invested passively in the broad market with percentage weights allocated to each asset class in MOSERS' policy asset allocation. Comparison of the total return to the policy benchmark is a reflection of the extent to which the asset allocation kept pace with the system's funding objectives. The total fund 1-year actual performance underperformed its policy benchmark by (0.9)%, with the actual 3-, 5-, 10-, 15-, and 20-year returns exceeding the policy benchmarks by 0.9%, 0.6%, 1.2%, 1.7%, and 1.1%, respectively.

The strategy benchmark is more narrowly defined and focuses on sub-asset class allocation decisions made by the CIO. By comparing the policy benchmark to the strategy benchmark, the board is able to determine the value added through strategic decisions (active management) made by the CIO. Value is created when the strategy benchmark returns exceed the policy benchmark returns.

Total Fund Actual Return vs. Benchmark Returns

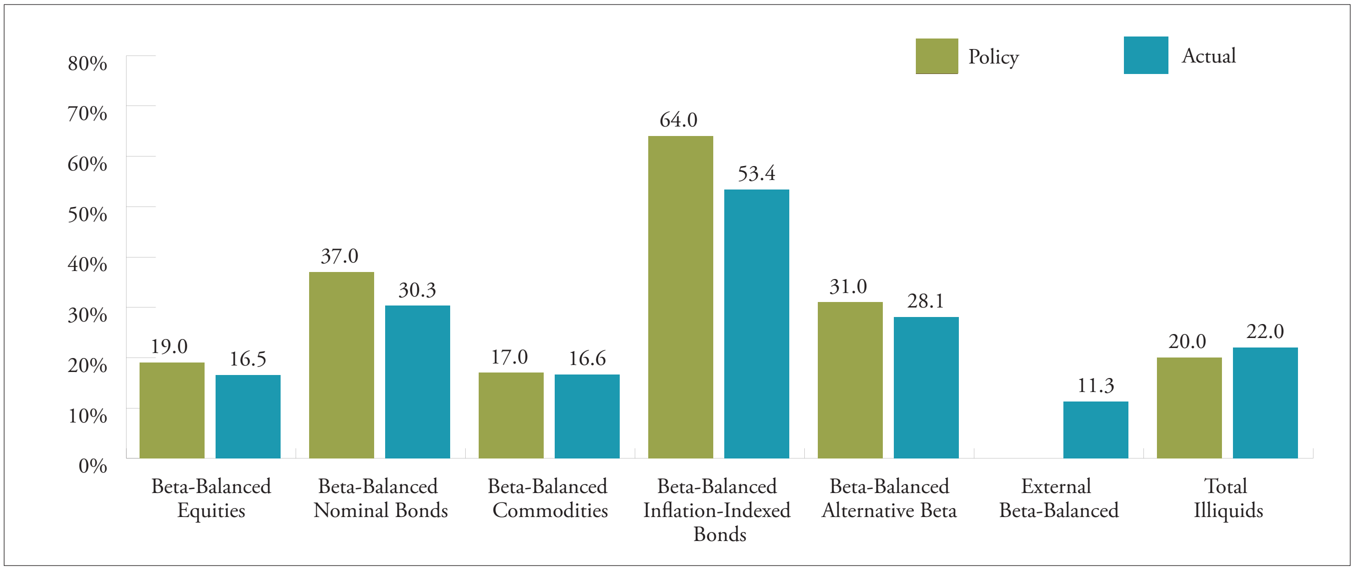
Similarly, by comparing the actual return to the strategy benchmark, the board will, over the long term, be able to judge the success or failure of the staff and the consultant in implementing the CIO's strategic decisions. The primary implementation decision is in determining which managers the fund should employ. Value is added from manager selection when the total fund return exceeds the strategy benchmark return.

Total Fund Policy Allocation Overview

As of June 30, 2015, the board's broad policy allocation mix was 80% beta-balanced and 20% illiquids. The policy target, as of June 30, 2015, for each sub-asset class, along with the actual strategic allocation to each type of investment, is shown in the bar graph below.

The board has granted authority to the CIO to make strategic decisions. A strategic decision should be thought of as any decision that might cause MOSERS' actual portfolio to differ from the policy asset allocation. This has allowed MOSERS to capitalize on investment opportunities at the margin by overweighting asset classes that are viewed as "cheap" relative to their historical norm and underweighting asset classes that are "expensive" relative to their historical norm.

Total Fund Allocation | Policy vs. Actual (As a Percentage of the Total Fund)



The asset allocation is built upon the belief that diversification is critical. The tables below reflect the asset classes and their correlation to each other and the statistical performance data, net of fees, of the total fund as of June 30, 2015.

Total Fund - Correlation Table - 5 Years

	Beta-Balanced Equities	Beta-Balanced Nominal Bonds	Beta-Balanced Commodities	Beta-Balanced Inflation-Indexed Bonds	Beta-Balanced Alternative Beta	Illiquids
Beta-balanced equities	1.00					
Beta-balanced nominal bonds	(0.56)	1.00				
Beta-balanced commodities	0.68	(0.51)	1.00			
Beta-balanced inflation-indexed bonds	0.25	0.37	0.23	1.00		
Beta-balanced alternative beta	0.48	(0.08)	0.16	0.30	1.00	
Illiquids	0.49	(0.42)	0.32	0.07	0.37	1.00

Total Fund - Statistical Performance

Portfolio Characteristics	1 Year	3 Year	5 Year	10 Year	15 Year	20 Year
Annualized return	(2.6)%	8.6%	9.6%	7.0%	6.4%	8.4%
Annualized standard deviation	6.9%	6.3%	7.4%	8.7%	9.1%	9.3%
Sharpe ratio	(0.37)	1.34	1.28	0.65	0.52	0.62
Excess return*	(0.9)%	0.9%	0.6%	1.2%	1.7%	1.1%
Beta*	0.90	0.94	0.81	0.74	0.80	0.84
Annualized alpha*	(1.1)%	1.3%	2.2%	2.5%	2.5%	2.2%
Correlation*	0.95	0.97	0.97	0.96	0.96	0.96
Value added in dollars**	$(84M)	$222M	$266M	$1.1B	$2.6B	$1.9B

* *As compared to the total fund policy benchmark.*

** *MOSERS earnings above what would have been earned if assets had been invested passively.*

Schedule of Investment Portfolios by Asset Class | As of June 30, 2015

	Fair Value	Percentage of Investments at Fair Value	Market Exposure	Percentage of Investments at Market Exposure
Internal beta-balanced				
Beta-balanced equities	$ 1,104,694,277	12.8%	$ 1,427,787,984	16.5%
Beta-balanced nominal bonds	562,285,365	6.5	2,615,294,169	30.3
Beta-balanced commodities	337,582,348	3.9	1,433,011,833	16.6
Beta-balanced inflation-indexed bonds	1,216,502,368	14.1	4,608,765,818	53.4
Beta-balanced alternative betas	2,534,151,349	29.4	2,424,668,938	28.1
Total internal beta-balanced	5,755,215,707	66.7	12,509,528,742	144.9
External beta-balanced	971,987,697	11.3	971,987,697	11.3
Illiquids				
Illiquids - growth	948,198,745	11.0	948,198,745	11.0
Illiquids - inflation	945,210,216	10.9	945,210,216	10.9
Illiquids - other	4,828,563	0.1	4,828,563	0.1
Total illiquids	1,898,237,524	22.0	1,898,237,524	22.0
Residual accounts from old portfolio	3,615,933	0.0	3,615,933	0.0
Cash reserve	4,252,917	0.0	0	0.0
Grand total	$ 8,633,309,778	100.0%	$15,383,369,896	178.2%

Reconciliation to *Statements of Fiduciary Net Position*	
Total portfolio value	$ 8,633,309,778
Reverse repurchase agreements	4,203,408,628
Short-term investment fund (STIF)	(2,237,306,892)
Uninvested cash	(24,873)
Interest and dividends receivable	3,971,868
Variation margin	(9,861,823)
Accounts receivable securities sold	(351,541,367)
Accounts payable securities purchased	1,598,102
Fees payable	14,516,313
Securities lending liability	690,291
Miscellaneous difference	1,317
Investments per *Statements of Fiduciary Net Position*	$10,258,761,342

Investment Advisors

Investment Advisors Name	Style	Portfolio Fair Value
Actis	Illiquid - emerging markets	$ 57,000,188
Aeolus Capital Management	Beta-balanced - reinsurance	52,603,734
Development Partners International	Illiquid - emerging markets	40,754,452
Alinda Capital Partners	Illiquid - infrastucture	32,066,063
American Industrial Partners	Illiquid - corporate buyout	37,604,116
AQR Capital Management	Beta-balanced - multi-strategy	472,186,061
AQR Capital Management	Beta-balanced - risk parity	414,845,844
Axiom Asia Private Capital	Illiquid - emerging markets	57,569,696
Axxon Group Private Equity Assessoria	Illiquid - emerging markets	13,946,019
Bayview Asset Management	Illiquid - opportunistic mortgages	57,990,414
Blackstone Alternative Asset Management	Beta-balanced - fund-of-funds	406,314,976
Blackstone Real Estate Partners	Illiquid - active real estate	243,463,988
Blakeney Management	Beta-balanced - emerging markets	71,261,126
Brevan Howard Capital Management	Beta-balanced - global macro	90,199,763
Bridgepoint Capital	Illiquid - corporate buyout	42,270,993
Bridgewater Associates	Beta-balanced - global macro	108,533,262
Bridgewater Associates	Beta-balanced - risk parity	481,531,232
Campbell Global	Illiquid - timberland	52,120,115
CarVal Investors	Illiquid - distressed real estate debt	26,200,000
Castlelake	Illiquid - special situations	35,296,413
Catalyst Capital Group	Illiquid - Canadian distressed debt	71,761,020
Catterton Partners	Illiquid - corporate buyout	54,919,178
Cornwall Capital Management	Beta-balanced - multi-strategy	65,443,517
Davidson Kempner Capital Management	Beta-balanced - event driven	75,611,906
DRI Capital	Illiquid - intellectual property	21,872,793
EIG Global Energy Partners	Illiquid - energy - mezzanine	70,474,827
Elliott Management Corporation	Beta-balanced - multi-strategy	115,569,705
Empyrean Capital Partners	Beta-balanced - event driven	31,651,180
Eton Park Capital Management	Beta-balanced - multi-strategy	1,054,914
Farallon Capital Management	Beta-balanced - multi-strategy	3,472,753
Gateway Energy Partners	Illiquid - energy - diversified	27,418,845
Glenview Capital Management	Beta-balanced - long/short - equity	45,339,075
Global Forest Partners	Illiquid - timberland	187,473,393
Harvest Fund Advisors	Illiquid - active mlp	168,643,023
HBK Capital Management	Beta-balanced - multi-strategy	75,784,533
JLL Partners	Illiquid - corporate buyout	65,139,963
King Street Capital Management	Beta-balanced - credit driven	6,606,219
Linden Capital Partners	Illiquid - corporate buyout	39,882,355
Mast Capital Management	Beta-balanced - credit driven	85,205,242
Merit Energy Company	Illiquid - energy - oil & gas	8,448,579
MHR Fund Management	Illiquid - distressed debt	85,822,872
Millennium Technology Value Partners	Illiquid - direct secondaries	17,654,811
New Mountain Capital	Illiquid - corporate buyout	43,855,577
NISA Investment Advisors	Beta-balanced	443,449,754
Oaktree Capital Management	Illiquid - opportunistic European loans	680,150
Oaktree Capital Management	Illiquid - real estate	3,429,080
Oaktree Capital Management	Illiquid - corporate buyout	18,830,848
Oaktree Capital Management	Illiquid - distressed debt	36,461,506

Investment Advisors continued on page 79

Investment Advisors continued from page 78

Investment Advisors Name	Style	Portfolio Fair Value
PAAMCO	Beta-balanced - fund-of-funds	1,112,622
Pharo Global Advisors	Beta-balanced - global macro	121,343,381
Resource Management Service - Wildwood Timberlands	Illiquid - timberland	71,128,944
Silchester International Investors	Beta-balanced - international equity	852,954,895
Silver Creek Capital Management	Illiquid - special situtations - fund-of-funds	39,270,244
Silver Lake Management	Illiquid - corporate buyout	12,787,923
SIR Capital Management	Beta-balanced - equity market neutral	91,222,068
Siris Capital Group	Illiquid - corporate buyout	26,622,258
State Street Global Advisors	Beta-balanced - emerging markets	261,637,331
StepStone Group	Illiquid - corporate buyout - fund-of-funds	32,657,295
Stone Harbor Investment Partners	Beta-balanced - emerging market debt	49,692,966
TPG-Axon Management	Residual - long/short - credit	1,328,662
Veritas Capital Fund Management	Illiquid - corporate buyout	91,569,584
Viking Global Investors	Beta-balanced - long/short - equity	160,278,379
Visium Asset Management	Beta-balanced - long/short - equity	108,624,726
Wellington Management Company	Beta-balanced - long/short - equity	1,023,740
Miscellaneous (each less than $1M)		2,477,909
		$6,591,449,000

Total Fund - Top Ten Publicly Traded Separate Account Holdings

Ten Largest Holdings as of June 30, 2015*	Fair Value	Percent of the Total Fund
U.S. Treasury Inflation Index Note - 0.125%, 2019	$302,541,242	3.68%
U.S. Treasury Inflation Index Note - 0.125%, 2017	274,750,173	3.34
U.S. Treasury Inflation Index Note - 0.125%, 2018	258,275,556	3.14
U.S. Treasury Inflation Index Note - 2.500%, 2024	242,358,256	2.95
U.S. Treasury Inflation Index Note - 0.125%, 2024	223,088,034	2.71
U.S. Treasury Inflation Index Note - 0.625%, 2024	220,932,698	2.69
U.S. Treasury Inflation Index Note - 0.125%, 2022	214,824,457	2.61
U.S. Treasury Inflation Index Note - 0.125%, 2023	214,184,772	2.61
U.S. Treasury Inflation Index Note - 0.250%, 2025	213,523,313	2.60
U.S. Treasury Inflation Index Note - 1.125%, 2021	209,357,989	2.55

** For a complete list of holdings, contact MOSERS.*

Investment Manager Fees | For the Year Ended June 30, 2015

	Total Fees	Manager Fees	Paid/Accrued Performance Fees
Beta-balanced portfolio			
Aeolus Property Catastrophe Spire Fund, LP	$ 1,289,621	$ 763,674	$ 525,947
AQR Absolute Return Institutional Fund, LP	2,207,923	645,741	1,562,182
AQR DELTA Sapphire Fund, LP	3,392,844	3,392,844	0
AQR Global Risk Premium Fund IV, LP	2,290,314	2,290,314	0
AQR Style Premia Fund, LP	258,880	0	258,880
Blackstone Topaz Fund, LP	4,084,409	3,431,642	652,767
Blakeney Onyx, LP	1,292,988	1,292,988	0
Brevan Howard, LP	1,322,385	1,322,385	0
Bridgewater Associates - Diamond Ridge Fund, LLC	3,564,144	3,564,144	0
Bridgewater Associates - All Weather Fund (12 vol.), LLC	1,876,314	1,876,314	0
Claren Road Credit Partners, LP	(299,796)	184,265	(484,061)
Cornwall Domestic, LP	2,121,291	860,943	1,260,348
Davidson Kempner Institutional Partners, LP	984,581	853,361	131,220
Elliott International, Ltd.	3,495,879	1,638,279	1,857,600
Eminence Fund, Ltd.	1,373,603	293,223	1,080,380
Empyrean Capital Fund, LP	1,082,358	924,711	157,647
Eton Park Fund, LP	386,335	276,821	109,514
Farallon Capital Institutional Partners, LP	36,643	0	36,643
Glenview Capital Opportunity Fund, LP	3,274,901	206,157	3,068,744
HBK Offshore Fund, Ltd.	1,684,812	1,365,074	319,738
King Street Capital, LP	43,847	43,847	0
King Street Capital, Ltd.	5,167	4,764	403
Mast Credit Opportunities I, LP	3,000,922	1,536,076	1,464,846
MOSERS, Inc.	14	14	0
NISA Investment Advisors	4,495,968	4,495,968	0
Perry Partners, LP	637	569	68
Pharo Macro Fund, Ltd.	3,253,808	2,502,013	751,795
Silchester International Investors	4,319,497	4,319,497	0
Silver Point Capital Fund, LP	(33,656)	0	(33,656)
SSGA Emerging Markets	224,223	224,223	0
Standard Investment Research Hedged Equity Fund	3,446,942	1,005,726	2,441,216
Stone Harbor Investment Partners	336,199	336,199	0
Viking Global Equities III, Ltd.	6,696,219	2,302,397	4,393,822
Visium Balanced Fund, LP	5,264,060	1,980,075	3,283,985
Total Beta Balanced managers	66,774,276	43,934,248	22,840,028
Illiquids portfolio			
Actis Emerging Markets III	726,000	726,000	0
Actis Emerging Markets IV	719,000	719,000	0
African Development Partners I, LLC	477,257	477,257	0
African Development Partners II, LLC	673,287	673,287	0
Alinda Infrastructure Fund I, LP	390,330	390,330	0
American Industrial Partners Capital Fund V, LP	2,872,259	690,000	2,182,259
Axiom Asia Private Capital Fund II, LP	748,523	390,000	358,523
Axiom Asia Private Capital Fund III, LP	500,000	500,000	0
Axxon Brazil Private Equity Fund II B, LP	600,001	600,001	0
Bayview Opportunity Domestic IIIb, LP	2,104,949	1,000,000	1,104,949
Bayview Opportunity Domestic LP	1,105,289	191,813	913,476
Blackstone Real Estate Partners IV	882,912	0	882,912
Blackstone Real Estate Partners V	6,048,592	0	6,048,592
Blackstone Real Estate Partners VI	6,152,875	710,238	5,442,637
Blackstone Real Estate Partners VII	4,518,591	1,049,909	3,468,682
Bridgepoint Europe III A, LP	137,037	137,037	0

Investment Manager Fees continued on page 81

Investment Manager Fees continued from page 80

	Total Fees	Manager Fees	Paid/Accrued Performance Fees
Bridgepoint Europe IV B, LP	239,790	239,790	0
Campbell Timber Fund II A, LP	506,836	506,836	0
CarVal Investors CVI Global Value Fund A, LP - private debt	171,427	171,427	0
CarVal Investors CVI Global Value Fund A, LP - real estate	171,427	171,427	0
Castlelake Aviation II, LP	1,061,178	500,786	560,392
Catalyst Fund Limited Partnership III	1,382,818	988,752	394,066
Catalyst Fund Limited Partnership IV	633,376	494,376	139,000
Catterton Partners V, LP	113,646	113,646	0
Catterton Partners VI, LP	417,087	311,450	105,637
Catterton Partners VII, LP	958,031	584,917	373,114
DRI Capital - LSRC	829,872	0	829,872
DRI Capital - LSRC II	7,128	7,128	0
EIG Energy Fund XIV, LP	342,930	342,930	0
EIG Energy Fund XV, LP	770,121	770,121	0
EIG Energy Fund XVI, LP	299,491	299,491	0
Garnet Sky Investors Company, Ltd.	2,376,632	624,601	1,752,031
Gateway Energy & Resource Holdings, LLC	112,657	32,936	79,721
Global Forest Partners GTI7 Institutional Investors Company, Ltd.	606,596	606,596	0
Harvest Fund Advisors, LLC	1,339,436	1,339,436	0
JLL Partners Fund V, LP	(344,782)	125,825	(470,607)
JLL Partners Fund VI, LP	3,830,756	377,491	3,453,265
Linden Capital Partners II, LP	268,529	268,529	0
Merit Energy Partners F II, LP	114,984	114,984	0
MHR Institutional Partners II A, LP	(31,762)	23,315	(55,077)
MHR Institutional Partners III, LP	42,689	486,021	(443,332)
MHR Institutional Partners IV, LP	477,472	477,472	0
Millennium Technology Value Partners II	1,000,271	670,379	329,892
New Mountain Partners III, LP	276,367	276,367	0
OCM Opportunities Fund IV B, LP	12,682	0	12,682
OCM Opportunities Fund VII B, LP	(156,023)	263,599	(419,622)
OCM Opportunities Fund VIII B, LP	(60,224)	353,529	(413,753)
OCM Power Opportunities III, LP	265,531	424,095	(158,564)
OCM Real Estate Opportunities Fund III, LP	160,402	0	160,402
OCM/GFI Power Opportunities Fund II, LP	(9,974)	15,486	(25,460)
Resource Management Service - Wildwood Timberlands, LLC	367,881	367,881	0
Silver Lake Partners II, LP	985,139	13,254	971,885
SIRIS Partners II, LP	300,203	72,058	228,145
StepStone Capital Buyout Fund I, LP	95,499	56,271	39,228
StepStone Capital Buyout Fund II, LP	127,443	127,443	0
StepStone Opportunities Fund II, LP	38,904	(43,754)	82,658
The Veritas Capital Fund III, LP	424,747	0	424,747
The Veritas Capital Fund IV, LP	1,514,820	0	1,514,820
Total Illiquid Portfolio Managers	50,698,935	20,831,763	29,867,172
Residual portfolio			
BlackRock Financial Management Bank Loans	7,528	7,528	0
TPG Axon Partners (Offshore), Ltd.	542,019	355,895	186,124
Total residual portfolio managers	549,547	363,423	186,124
Grand totals	$118,022,758	$65,129,434	$52,893,324

Schedule of Investment Results* | 1-, 3-, 5-, 10-, 15- and 20-Year Periods

Total fund - As of June 30, 2015, the policy benchmark was comprised of the following components: 80% total beta-balanced policy benchmark and 20% total illiquids portfolio policy benchmark. The individual asset class benchmarks, as listed below, are used to generate the total fund policy benchmark.

- ***Beta-balanced*** - As of June 30, 2015, the total beta-balanced policy benchmark was comprised of the following components: 24% MSCI ACWI Net, 46% Barclays Long Treasuries, 21% S&P GSCI, 80% Barclays U.S. TIPS 1-10 YR, and 39% AQR Delta. This program did not begin until September 2012.
- ***Illiquids*** - As of June 30, 2015, the illiquids benchmark was comprised of the following components: 63.5% S&P 500 +3%, 19.6% Dow Jones U.S. Select REIT, and 16.9% Timber. This program did not begin until September 2012.

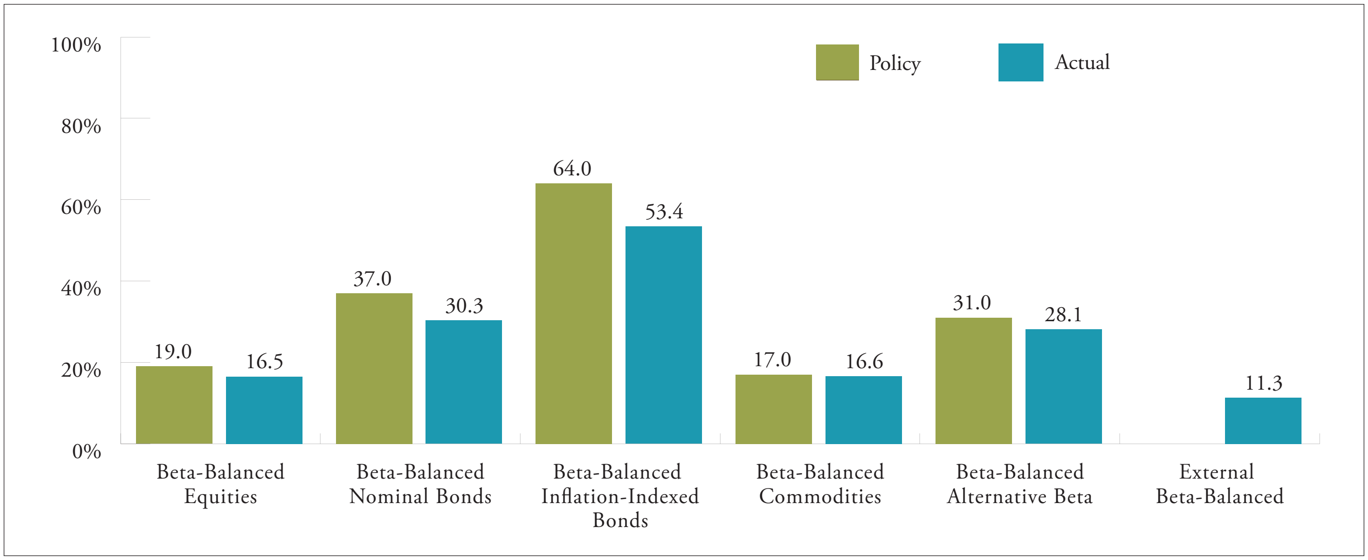
	1 Year	3 Year	5 Year	10 Year	15 Year	20 Year
Total fund *						
MOSERS	(2.6)%	8.6%	9.6%	7.0%	6.4%	8.4%
Composite total return benchmark	(1.7)%	7.7%	9.0%	5.8%	4.7%	7.3%
*Beta-balanced***						
MOSERS	(4.8)%	N/A	N/A	N/A	N/A	N/A
Beta-balanced composite benchmark	(4.1)%	N/A	N/A	N/A	N/A	N/A
*Illiquids***						
MOSERS	5.4%	N/A	N/A	N/A	N/A	N/A
Illiquids benchmark	8.0%	N/A	N/A	N/A	N/A	N/A

** Time weighted rates of return on fair market values adjusted for cash flows.*
*** Beta-balanced inception date was September 1, 2012*

Beta-Balanced Asset Class Summary

As of June 30, 2015, the beta-balanced allocation returned (4.8)%. The loss was caused by the policy allocation to commodities.

Beta-Balanced Allocation | Policy vs. Actual (As a Percentage of the Total Fund)



Highlights

- External active management decisions this year, specifically the external managers in the alternative beta allocation, caused the return to be (0.7)% below our policy benchmark. External managers in the equity and external risk parity allocation had positive value added results.
- Our strategy of being overweight emerging market equities and owning inflation break-evens in the long treasury allocation were unsuccessful. However, our underweights in TIPS and commodities, combined with our overweight in alternative betas were positive enough to offset any negatives. In sum, strategy did not add or subtract any value for the year.

Portfolio Structure

The goal of the beta-balanced portfolio is to equalize the portfolio's risk exposure across economic environments through risk-balanced allocations to assets. The assets currently being used in the beta-balanced portfolio are global equities, U.S. nominal bonds, inflation-indexed bonds, commodities and alternative betas.

There is both an internal and external component of the beta-balanced portfolio. Bridgewater All Weather and AQR Global Risk Parity are utilized for the external portion of the risk balanced portfolio, while the internal portion is managed by staff utilizing NISA Investment Advisors to implement the trading and operational aspects of the program.

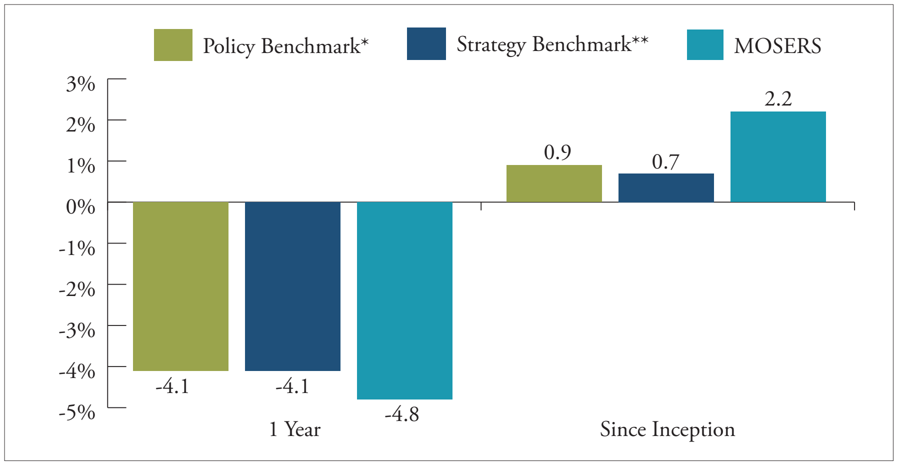
Market Overview

Over the course of the year, the U.S. dollar appreciated by 21% at its high and finished the year up 17%. The dollar strength was caused by the weakness in emerging economies caused by lower energy prices, as well as large quantitative easing programs in Europe and Japan. On top of all this, the Federal Reserve appeared poised to raise their benchmark rate for the first time since 2006. In general, assets reflected the weakness abroad and the strength at home. For instance, large cap U.S. equities were up a little over 7% and U.S. real estate was up around 5%, while developed international equities were down about 3.5% and emerging equities were down about 5%. The weakness seen in the commodities caused a decline of 37%, MLPs declined by about 17% and energy sector equities were down around 22%. The bright spot on the year was long U.S. treasury bonds which were up a little over 6% as people reacted to the weakness in the global economies. The success story this year was U.S. assets, while most global assets (adjusted for currency swings) were mediocre at best and more likely negative.

Performance

For the fiscal year, the beta-balanced portfolio returned (4.8)% versus (4.1)% for the policy benchmark. The portfolio had a difficult year because the majority of the assets had a difficult year. Global equities were nearly unchanged for the year, TIPS break-evens caused losses and commodities had an abnormally large negative event. The loss in oil was dramatic; whereby, a decade's worth of price gains was lost in a 12 month period. Given that three of our assets were roughly unchanged or negative, the negative return was not surprising. Our external managers detracted from the return this year. While the external beta-balanced managers and our active developed international equity manager did well, the main contributor to detraction was the active hedge fund managers in the alternative beta allocation. The bar chart to the right illustrates actual performance as compared to the policy and strategy benchmarks since inception. A description of each asset class follows:

Beta-Balanced Return vs. Benchmark Returns



* As of June 30, 2015, the total beta-balanced policy benchmark was comprised of the following components: 24% MSCI ACWI Net, 46% Barclays Long Treasuries, 21% S&P GSCI, 80% Barclays U.S. TIPS 1-10 YR, and 39% AQR Delta. All policy return components are adjusted for financing cost associated with the beta- balanced program. This program did not begin until September 2012.

** As of June 30, 2015, the total beta-balanced strategy benchmark was comprised of the following components: 24.2% MSCI ACWI Net, 42.7% Barclays Long Treasuries, 24.2% S&P GSCI, 77.3% Barclays U.S. TIPS 1-10 YR, and 41.6% AQR Delta. All strategy return components are adjusted for financing cost associated with the beta-balanced program. This program did not begin until September 2012.

- **Equities:** The notional value of the equity portfolio on June 30, 2015 was $1,427,787,984, representing 16.5% of total notional exposure. For the fiscal year, the equity allocation returned 1.7% versus 0.9% for the global equity policy benchmark. While the strategy of being overweight emerging markets slowed the portfolio, outperformance from external active management helped the equity portfolio exceed expectations. The external manager in the developed international allocation was a bright spot for the portfolio this year and was responsible for all of the value added in the equity allocation.
- **Long treasuries (nominal bonds):** As of June 30, 2015, the notional value of the long treasury portfolio was $2,615,294,169, representing 30.3% of total notional exposure. For the fiscal year, the long treasury allocation returned 5.8% versus 6.2% for the long treasury policy benchmark. Preferring to own TIPS in lieu of nominal treasuries and the tracking error associated with our futures implementation were the cause of the underperformance this year.
- **TIPS (inflation-indexed bonds):** As of June 30, 2015, the notional value of the TIPS portfolio was $4,608,765,818, representing 53.4% of total notional exposure. For the fiscal year, the TIPS allocation matched the TIPS policy benchmark at (2.1)%. There was no internal or external active management used in the portfolio this year; thus providing a return that closely matched the benchmark.
- **Commodities:** As of June 30, 2015, the notional value of the commodity portfolio was $1,433,011,833, representing 16.6% of total notional exposure. For the fiscal year, the commodity allocation returned (35.3)% versus (36.9)% for the commodity policy benchmark. The majority of the allocation was invested in the S&P GSCI index with the exception of a small strategic position in gold and oil. The value added was from the gold performance exceeding the performance of the index.
- **Alternative betas:** As of June 30, 2015, the notional value of the alternative beta portfolio was $2,424,668,938, representing 28.1% of total notional exposure. The alternative beta allocation returned 5.9% for the fiscal year versus 8.4% for alternative beta policy benchmark. The under-performance was attributable to active hedge fund managers.
- **External beta-balanced:** This allocation is composed of AQR Global Risk Parity and Bridgewater All-Weather. As a portfolio they returned (3.6)% for the fiscal year and represented 11.3%, or $971,987,697, of market exposure. Similar to the internal portfolio, their performance was the result of below average results from most asset classes and a particularly large loss in commodities. As a portfolio, these two managers exceeded their benchmark for the year by 0.5%.

Additional Portfolio Information

The table below shows the statistical performance that occurred withing the beta-balanced portfolio in FY15.

Beta-Balanced - Statistical Performance

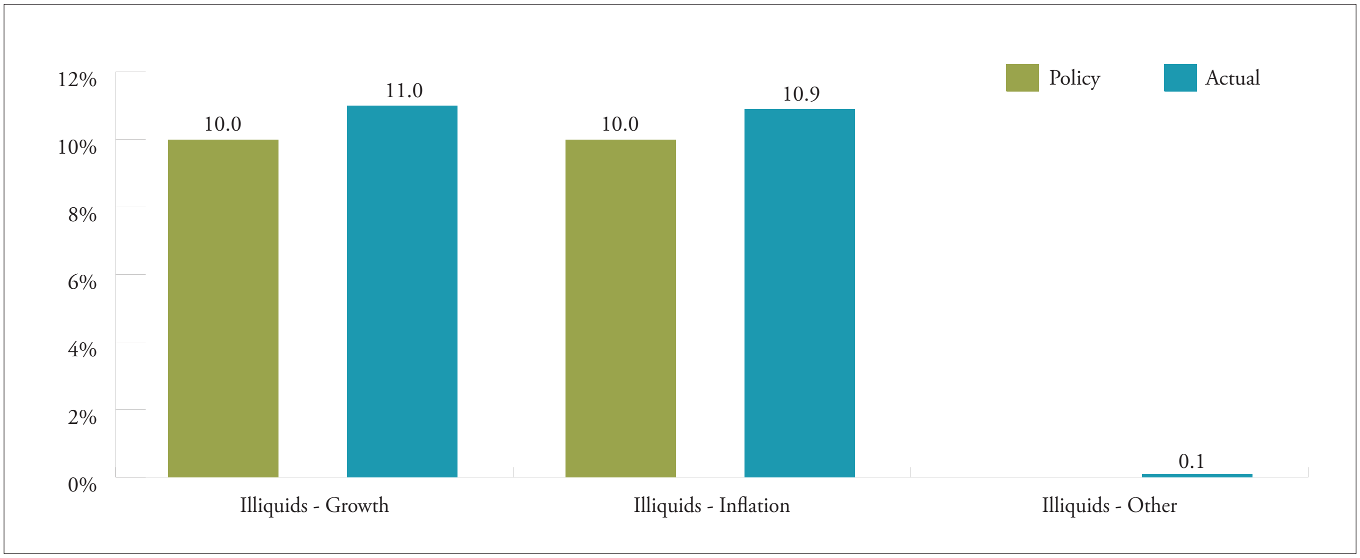
Portfolio Characteristics	1 Year	Since Inception (September 2012)
Return	(4.8)%	2.2%
Annualized standard deviation	8.8%	8.7%
Sharpe ratio	(0.48)	0.25
Excess return*	(0.7)%	1.3%
Beta*	0.97	1.02
Annualized alpha*	(0.8)%	1.3%
Correlation*	0.96	0.97

* *As compared to the beta-balanced policy benchmark.*

Illiquids Asset Class Summary

The illiquid investments portfolio returned 5.4%, net of fees, for the fiscal year. While the returns from the growth and inflation sub-portfolios were similar, the growth segment performed slightly better.

Illiquids Allocation | Policy vs. Actual (As a Percentage of the Total Fund)



Highlights

- The illiquid investments portfolio holds a broad set of investments that are diversified by asset class, asset type, and geography. The portfolio is expected to achieve attractive long-term returns while contributing to the diversification of the total portfolio.
- At the end of the fiscal year, illiquid investments made up 22.0% of the total portfolio, which was above its 20.0% target allocation.

Portfolio Structure

The illiquid investments portfolio is divided into two segments: One segment investing in opportunities that will benefit from economic growth, while the other seeks opportunities that are expected to perform well during periods of inflation. The illiquid investments portfolio, similar to the beta-balanced portfolio, is structured to distribute its investment risks across a broad group of assets in order to perform well in a variety of economic environments.

This structure provides the flexibility to invest in a broad group of assets. The growth segment invests in asset categories such as private equity and private debt. More specifically, these categories include investments such as domestic buyout, European buyout, emerging market private equity and private debt in the U.S., Europe and Canada. Similarly, the inflation segment invests in a number of asset categories, including such things as real estate, timber, energy, infrastructure and royalties. The implementation of the illiquid investment strategy is accomplished by holding a number of investments that are managed by 32 separate investment management firms.

Market Overview

As described above, the illiquid investments portfolio holds a variety of assets that are expected to behave differently from a risk/return perspective. The following paragraphs briefly describe the markets in which the illiquid investments portfolio has substantial exposure.

In general, private investments experienced a positive year. However, given the breadth of the private universe, the performance of the underlying segments was varied. Overall, private equity and distressed credit investments generated a positive return, but the strength of the U.S. dollar negatively impacted the returns of non-U.S. investments. The performance of private investments, while positive, underperformed returns achieved by the broad domestic public equity markets. For the one-year period ended March 31, 2015, the Institutional Limited Partners Association (ILPA) Private

Markets Benchmark-All Funds Index achieved a net-of-fee return of 8.9%. This index, which measures the return of a broad group of private investments, is calculated by the ILPA, in partnership with Cambridge Associates, and lags public benchmarks due to reporting delays that are inherent to the asset class. Fundraising for private investments has remained robust as investors continue to deploy capital into a variety of alternative investments.

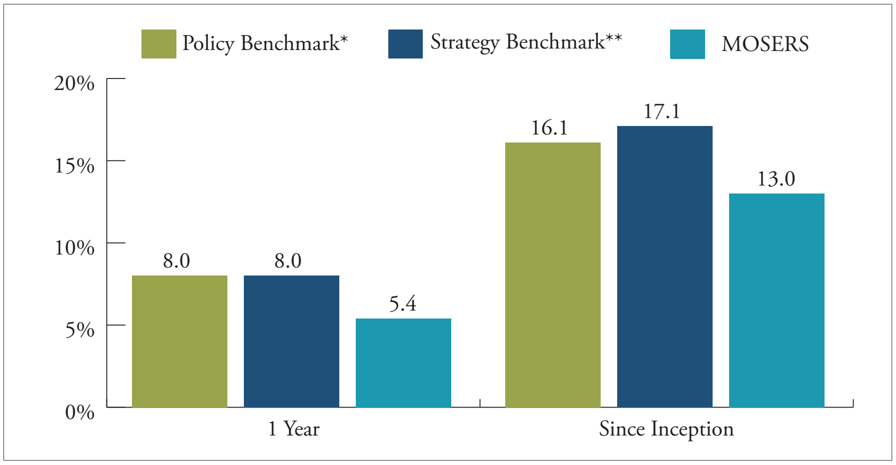
The institutional real estate market covers a number of segments, including office, apartment, retail, industrial, and hotel. Exposure to real estate can be achieved through either the public or private markets. On the public side, exposure is typically achieved through an investment in Real Estate Investment Trusts (REIT) securities. The REIT market, as represented by the Dow Jones U.S. Select REIT Index, returned 5.2% for the year ended June 30, 2015, somewhat below its long-term average. Exposure to private real estate markets is usually accomplished by either owning properties directly or through an investment in a fund that owns the underlying properties. The National Council of Real Estate Investment Fiduciaries (NCREIF) tracks domestic investment grade, income producing, and operating properties that are owned by tax-exempt institutional investors. The NCREIF Property Index (NPI) is the most widely used benchmark to measure the performance of private real estate. For the latest year, the NPI returned 13.0% with strong returns from all underlying segments. Timber is an asset class that appeals to a number of investors with a long term investment horizon due to the extended growth cycle of trees. An investment in timber has several characteristics that differentiate it from that of other assets in the portfolio. For example, if properly planned and managed, timber can provide investors with significant recurring cash flow over extended periods of time. Another characteristic, particularly valuable in volatile economic environments, is that harvest schedules can be managed to cut more timber in order to take advantage of periods of high prices. Also, harvests can be postponed to avoid markets where pricing is weak. In this case, the trees continue to grow and add volume while the investor waits for stronger prices. The NCREIF Timberland Index is a common benchmark used to track the performance of private U.S. timberlands. For the latest year ended June 30, 2015, the index returned 10.0%.

Assets in the energy and energy-related infrastructure sector experienced significant declines over the past year. During the year ended June 30, 2015, prices for crude oil, after several years of trading in a relatively narrow range, fell by more than 50%. The energy sector, as measured by the Standard & Poor's Energy Select Sector Index, which consists of large U.S. energy companies with global operations, returned a negative 25.0% for the year. Energy infrastructure also suffered through a tough year. The Standard & Poor's Master Limited Partnership Index, an index of publicly traded partnerships, returned (16.5)% for the year ended June 30, 2015.

Performance

Benchmarking a portfolio of illiquid investments, especially a portfolio that holds both growth and inflation-sensitive assets, has always been a challenge. However, in the investment industry, benchmarks are necessary in order to assess performance. When selecting an appropriate benchmark it is important that it meet a number of criteria. It must be: identifiable in advance, investable, calculated frequently, and consistent with the manager's investment style. Generally, in the case of private markets, these criteria are not satisfied.

Illiquids Return vs. Benchmark Returns



* As of June 30, 2015, the illiquids policy benchmark was comprised of the following components: 100% S&P 500 +3%. This program did not begin until September 2012.

** As of June 30, 2015, the illiquids strategy benchmark was comprised of the following components: 63.5% S&P 500 +3%, 19.6% Dow Jones U.S. Select REIT Index and 16.9% NCREIF Timber. This program did not begin until September 2012.

While selecting an appropriate benchmark isn't easy, it is a necessary exercise. A common approach to benchmarking illiquid investments is to start with an index of publicly traded equity securities, such as the S&P 500 Index, and then add an illiquidity risk premium to compensate investors for committing and locking up their capital for an extended period of time.

For the fiscal year, the illiquid investments portfolio returned 5.4%, net of fees, as illustrated in the bar chart above.

Over this same period, the illiquid investments policy benchmark, a blend of asset class policy indexes, returned 8.0%. While it is interesting to monitor shorter-term performance, illiquid investments need to be evaluated over a long time frame. By looking at performance over multi-year periods, the short term volatility of public markets is removed and managers of illiquid assets are provided sufficient time to build and possibly exit their investments. Over a longer period, the latest ten years ending June 30, 2015, for instance, the illiquid investments portfolio (including its predecessor portfolios) returned 8.7%, which is just under the policy index return of 9.1%.

As discussed above, the illiquid investments portfolio is made up of a growth-sensitive segment and an inflation-sensitive segment. In addition, a small portfolio is also included that provides funding for near term capital calls. For the most recent fiscal year, the performance of the two segments was similar. Below is additional detail on each segment:

- **Growth segment:** As of June 30, 2015, the market value of the growth portion of the portfolio was $948,198,745, representing 11.0% of the total fund's capital. For the fiscal year, this segment returned 5.6%, net of fees. Within this sub-portfolio are a number of asset categories, including domestic and European buyout private equity, emerging market private equity and distressed debt.
- **Inflation sensitive:** At the end of the fiscal year, the market value of the inflation-sensitive portfolio was $945,210,216, representing 10.9% of the total fund's capital. For the 2015 fiscal year, the segment returned 5.2%, net of fees. The inflation segment also contains a diverse set of investments, including domestic and international timber, real estate, energy, infrastructure and royalties.

The funding portfolio held securitized liquid assets of $4,828,563, or 0.1% of total fund assets, at the end of the fiscal year.

The current objective of the illiquid investment portfolio is to perform well during multiple economic environments. By combining assets with differing characteristics, the illiquid investments portfolio is positioned to generate an attractive return while providing diversification to the total fund.

Additional Portfolio Information

The tables on the following page show the brokerage activity and statistical performance that occurred withing the illiquids portfolio in FY15.

Illiquids - Brokerage Activity

	Shares Traded	Volume of Trades	Commissions Paid
Baird, Robert W & Co., Inc.	16,702	$ 767,647	$ 200
Barclays Capital	10,649	377,889	238
Benchmark Company, LLC	1,204	69,371	36
BNY Convergex	245,571	10,024,105	2,659
BTIG, LLC	173,450	6,856,391	1,674
Cantor Fitzgerald & Co., Inc.	14,618	582,703	439
Citigroup Global Markets, Inc.	354,473	13,016,968	10,634
Credit Suisse Securities	11,009	389,930	330
Deutsche Bank Securities, Inc.	8,184	354,980	246
FBR Capital Markets & Company	77,391	3,507,790	2,322
JP Morgan Securities, Inc.	6,468	391,676	194
Janney Montgomery Scott	10,660	508,408	320
Jefferies & Company, Inc.	65,274	2,516,604	337
Jonestrading Institutional Services, LLC	42,610	1,228,891	1,278
Liquidnet, Inc.	63,125	3,081,883	1,263
Merlin Securities, LLC	1,144,742	56,142,879	14,261
Merrill Lynch Pierce Fenner Smith, Inc.	6,627	510,531	199
Morgan Stanley & Company, Inc.	34,983	1,168,333	954
Pickering Energy Partners	7,489	334,625	225
Raymond James & Associates, Inc.	21,056	584,894	632
RBC Capital Markets, LLC	124,728	7,088,963	692
UBS Securities, LLC	142,759	5,916,705	2,195
USCA Securities, LLC	103,635	4,809,951	1,912
Weeden & Company	110,523	4,133,600	1,734
Wells Fargo Securities, LLC	61,383	2,526,938	1,787
	2,859,313	$126,892,655	$46,761

Illiquids - Statistical Performance

Portfolio Characteristics	1 Year	Since Inception (September 2012)
Return	5.4%	13.0%
Annualized standard deviation	2.9%	3.4%
Sharpe ratio	1.84	3.83
Excess return*	(2.6)%	(3.0)%
Beta*	0.15	0.21
Annualized alpha*	4.0%	9.1%
Correlation*	0.50	0.51

** As compared to the beta-balanced policy benchmark.*

Securities Lending Program

During the fiscal year ending June 30, 2015, MOSERS earned net income of $116,204 through its securities lending program. MOSERS lends its domestic equity, international equity and fixed income securities through Deutsche Bank which manages the program in an agent capacity. In an agent lending program, the agent lender is responsible for making the loans to various broker-dealers, investing the cash collateral associated with the loaned securities, marking the loans and collateral to market on a daily basis, and, in most cases, indemnifying the lender against the default of a broker-dealer to whom they have loaned securities on behalf of the beneficial owner.

In FY15, income from domestic equity decreased due to a decrease in the average lendable balance, average on loan and lending margin. There was no income from international equity or fixed income as there were no securities to lend during the period. The tables below show the last ten years of activity for the securities lending program.

Domestic Equity

Year	Average Lendable	Average on Loan	Average Utilization	Lending Margin (basis points)	Net Income
FY15	$168,456,525	$ 53,517,452	31.8%	6.9	$ 116,204
FY14	187,154,236	62,768,614	33.5	22.6	422,422
FY13	238,024,131	69,543,634	29.2	25.1	596,941
FY12	424,041,044	145,373,164	34.3	19.1	810,972
FY11	376,047,357	111,263,248	29.6	16.5	619,648
FY10	321,114,801	83,944,408	26.1	26.9	864,401
FY09	307,082,718	114,261,769	37.2	52.0	1,596,245
FY08	440,025,347	195,971,154	44.5	36.6	1,611,536
FY07	711,856,029	281,338,681	39.5	14.0	994,416
FY06	856,712,658	377,314,359	44.0	14.2	1,218,245

International Equity

Year	Average Lendable	Average on Loan	Average Utilization	Lending Margin (basis points)	Net Income
FY15	$ 0	$ 0	0.0%	0.0	$ 0
FY14	0	0	0.0	0.0	0
FY13	192,359,434	49,525,171	25.7	5.6	108,379
FY12	309,052,299	47,666,253	15.4	7.5	230,655
FY11	320,082,404	88,623,017	27.7	10.4	333,000
FY10	277,251,343	19,736,528	7.1	4.0	109,946
FY09	342,215,198	32,267,851	9.4	14.9	510,622
FY08	467,893,205	56,994,925	12.2	15.5	726,565
FY07	485,230,034	41,033,858	8.5	8.1	395,017
FY06	483,512,648	48,077,237	9.9	12.9	605,315

Fixed Income

Year	Average Lendable	Average on Loan	Average Utilization	Lending Margin (basis points)	Net Income
FY15	$ 0	$ 0	0.0%	0.0	$ 0
FY14	247,256,630	185,527,243	75.0	4.4	108,552
FY13	622,620,959	427,442,773	68.7	5.1	315,060
FY12	776,256,144	516,553,974	66.5	6.4	496,074
FY11	805,579,308	505,690,676	62.8	7.2	581,875
FY10	836,242,270	190,547,907	22.8	2.8	230,031
FY09	859,512,525	517,356,516	60.2	43.3	3,722,523
FY08	1,082,813,165	894,372,380	82.6	56.4	6,104,526
FY07	950,069,746	695,743,093	73.2	15.5	1,469,860
FY06	1,183,366,351	776,959,063	65.7	15.7	1,853,181

Actuarial Section

★ ★ ★ ★ ★

Like many of you over the course of our working career, I worked in a few jobs before I found one where I could enjoy contributing to an organization as a long-term employee. I came to MOSERS in 1980 and remained employed there until I retired in 2007. I can attest first hand that MOSERS "strives for excellence" in all aspects relating to its members and management of our pension plan. You and I are in "good hands" with MOSERS.

— Diana Mosier, Manager of Administrative Services
Years of Service: 1980 - 2007

Actuarial Section

Actuary's Certification Letter

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
One Towne Square
Suite 800
Southfield, MI 48076-3723
248.799.9000 phone
248.799.9020 fax
www.gabrielroeder.com

October 16, 2015

The Board of Trustees
Missouri State Employees' Retirement System
907 Wildwood Drive
Jefferson City, Missouri 65109

Dear Board Members:

The basic financial objective of the Missouri State Employees' Retirement System (MOSERS), as stipulated under Missouri Revised Statutes 104.440 and 104.1066, is to establish and receive contributions which:

(1) when expressed in terms of percents of active member payroll will remain approximately level from generation to generation of Missouri citizens, and which

(2) when combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of MOSERS.

In order to measure progress toward this fundamental objective, MOSERS performs annual actuarial evaluations on the Missouri State Employees' Retirement Plan (MSEP) and the Judges Retirement Plan (Judicial Plan). The purposes of the valuations are to (i) measure present financial position, and (ii) establish contribution rates that provide for the normal cost and level percent of payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. The latest completed actuarial valuations were based upon data and assumptions as of June 30, 2015, presented to the board in separate reports issued September 14, 2015. These valuations indicate that the calculated contribution rates for the fiscal year ending June 30, 2017, for the benefits scheduled to be in effect on and after July 1, 2015, meet the basic financial objective. These contribution rates are 16.34% of payroll for 49,980 active MSEP members, and 55.76% of payroll for 405 Judicial Plan members.

At the September 17, 2014, board meeting, the board adopted a minimum funding policy. Specifically, the minimum employer contribution rate will remain at the level calculated in the June 30, 2013, valuation until the respective plans are individually 80% funded. These contribution rates are 16.97% of payroll for active MSEP members, and 58.45% of payroll for Judicial Plan members.

The GASB 67 disclosures were issued on September 15, 2015, in a separate report due to the expressed intent of GASB to disconnect reporting requirements from funding requirements.

The actuarial valuations are based upon financial and participant data which is prepared by retirement system staff, assumptions regarding future rates of investment return, salary increases, inflation, and assumptions regarding rates of retirement, turnover, death, and disability among MSEP and Judicial Plan members and their beneficiaries. The data is reviewed by us for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends.

We are not responsible for the accuracy or completeness of the data. The demographic assumptions were adopted by the board of trustees on June 20, 2012, based upon recommendations made in an experience study covering the period from 2007 to 2011. The economic assumptions were adopted by the board of trustees on July 19, 2012. The assumptions and methods used in this valuation comply with the current actuarial standards of practice.

The benefit structure is outlined in this section of the annual report. We provided the information used in the supporting schedules in the *Actuarial Section* and the *Schedules of Funding Progress* in the *Financial Section*, as well as the employer contribution rates shown in the *Schedule of Employer Contributions* in the *Financial Section*.

Based upon the valuation results, it is our opinion that the Missouri State Employees' Retirement Plan and the Judicial Retirement Plan continue to operate in accordance with actuarial principles of level percent of payroll financing. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the plans as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This certification letter should not be relied on for any purpose other than the purposes described. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

David T. Kausch and Brad Lee Armstrong are independent of the plan sponsor and Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

David T Kausch

David T. Kausch, FSA, EA, MAAA
Senior Consultant & Chief Actuary

Brad L Armstrong

Brad Lee Armstrong, ASA, EA, MAAA
Senior Consultant & Actuary

Summary of Actuarial Assumptions

Economic Assumptions

The economic assumptions were adopted by the board on July 19, 2012, to be first effective for the June 30, 2012, valuation. The assumed rate of return on investments used in the FY15 valuations was 8% per year, compounded annually (net after investment expenses). This assumption takes into consideration that equal amounts of money payable at different points in time in the future do not have the same value presently.

Pay increase assumptions for individual active members are shown for sample ages on pages 94 and 96. A portion of the assumption for each age represents merit and/or seniority increase, and the other 3% recognizes wage inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

The active member payroll is assumed to increase 3% annually, which is the portion of the individual pay increase assumptions attributable to wage inflation. The 2015 MSEP valuation payroll is expected to grow at 0% the first year and 3% per year thereafter. The annual cost-of-living adjustment (COLA) is assumed to be 4%, on a compounded basis, when a minimum COLA of 4% is in effect (4% for 12 years, 3.06% the next year to reach a cumulative 65% followed by 2%). When no minimum COLA is in effect, price inflation is assumed to be 2.5% and the annual COLA is assumed to be 2% (80% of 2.5%), on a compounded basis.

The table to the right provides the assumed rate of return (ARR) on investments, assumed price inflation (API) and real return objective (RRO) for the past ten valuation years.

Valuation Year	ARR %	API %	RRO %
2015	8.0%	2.5%	5.5%
2014	8.0	2.5	5.5
2013	8.0	2.5	5.5
2012	8.0	2.5	5.5
2011	8.5	3.2	5.3
2010	8.5	3.2	5.3
2009	8.5	3.2	5.3
2008	8.5	3.5	5.0
2007	8.5	3.5	5.0
2006	8.5	3.5	5.0

Non-Economic Assumptions

The demographic assumptions were adopted by the board on July 19, 2012, to be first effective for the June 30, 2012, valuation. The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the RP 2000 combined healthy mortality table, projected to 2016 with Scale AA. Related values are shown on pages 94 and 96. This assumption is used to measure the probabilities of each benefit payment being made after retirement. The pre-retirement mortality rates used were 100% of the post-retirement mortality rates for males and 80% of the post-retirement mortality for females. The mortality tables include a margin of 15% for men and 17% for women for mortality improvements based on the four year experience study from July 1, 2007 to June 30, 2011.

The probabilities of age and service retirement are shown on page 95. It was assumed that each member will be granted one-half year (4 months for 2011 plan members) of service credit for unused leave upon retirement and military service purchases. The probabilities of withdrawal from service, disability and death-in-service are shown for sample ages on pages 94-96. For disability retirement, impaired longevity was recognized by use of special mortality tables.

The entry age normal actuarial cost method of valuation was used in determining liabilities and normal cost. Each member's normal cost was based on the benefit provisions applicable to that member. The normal cost is projected to the applicable fiscal year. Differences in the past between assumed experience and actuarial experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments, (principal and interest) which are level percents of payroll contributions.

The amortization of the unfunded actuarial accrued liability is based on a closed 30-year amortization period, level percent of payroll amortization. This method was first effective with the June 30, 2014 valuation. The amortization is based on the projected unfunded actuarial accrued liability to the beginning of the fiscal year during which the contributions are expected to be made. The unfunded accrued actuarial liability (UAAL) payment is calculated such that the minimum employer contribution rate will be 16.97% of payroll and 58.45% for judges (the rate calculated in the June 30, 2013 valuation) until such a time as each plan is a least 80% funded. When the plan become at least 80% funded, the remaining closed amortization period will be used to calculate the employer contribution rate to be made. Employer contribution dollars were assumed to be paid in equal installments throughout the employer's fiscal year.

The valuation assets used to determine funding requirements recognize assumed investment income fully each year, along with one-third of cumulative investment gains or losses. Valuation assets are restricted to a symmetrical corridor of no less than 80% and no more than 125% of the fair market value of assets.

The data about persons now covered and about present assets were furnished by the system's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

The liabilities for active members hired on or after January 1, 2011, were based on MSEP 2011 benefits. The liabilities for active members hired on or after July 1, 2000, (April 26, 2005 for administrative law judges) were based on MSEP 2000 benefits. The liabilities for active members hired before July 1, 2000, for elected officials, General Assembly, and uniformed water patrol were based on MSEP benefits. The liabilities for all other active members hired before July 1, 2000, were based on the assumption that members would elect MSEP 2000 prior to age 62 and MSEP on or after age 62.

For members on long-term disability, the actuarial accrued liability is the present value of benefits under active assumptions plus the difference of the present value of benefits with and without future pay growth to reflect indexing of pay in ultimate retirement benefits.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

MSEP - Retirement Values | June 30, 2015

Sample Attained Ages	Present Value of $1/Month the First Year (with 50% Joint & Survivor) Increasing 4.0%/2.0% Yearly				Present Value of $1/Month the First Year Increasing 2.0% Yearly				Future Life Expectancy (Years)			
	Service		Disability		Service		Disability		Service		Disability	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
40	$224.11	$224.12	$212.76	$211.89	$184.40	$186.75	$169.01	$172.32	41.95	44.10	32.39	34.43
45	217.22	217.01	202.65	201.39	177.68	180.43	157.94	162.08	37.15	39.24	27.68	29.69
50	208.28	207.81	190.14	188.39	169.01	172.32	144.49	149.76	32.39	34.43	23.13	25.13
55	196.76	196.07	175.18	172.83	157.94	162.08	128.94	135.56	27.68	29.69	18.87	20.84
60	182.48	181.61	157.88	154.80	144.49	149.76	111.76	119.87	23.13	25.13	14.96	16.90
65	165.46	164.49	138.11	134.44	128.94	135.56	92.72	102.82	18.87	20.84	11.39	13.32
70	145.94	144.91	116.94	112.03	111.76	119.87	73.10	84.62	14.96	16.90	8.29	10.12
75	123.90	123.17	96.04	88.83	92.72	102.82	55.15	66.19	11.39	13.32	5.83	7.37
80	100.55	100.10	76.52	68.15	73.10	84.62	40.28	50.49	8.29	10.12	4.03	5.31
85	78.09	77.41	59.89	52.82	55.15	66.19	30.32	40.10	5.83	7.37	2.91	4.05

MSEP - Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions | June 30, 2015

Sample Ages	Years of Service	Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Employee		
		Withdrawal*		Death**		Disability				
		Men	Women	Men	Women	Men	Women	Merit and Seniority***	Base (Economy)	Increase Next Year
	0	23.0%	26.9%							
	1	18.0	20.5							
	2	15.0	15.4							
	3	13.0	12.5							
	4	11.0	10.9							
25	5+	13.0	13.3	0.03%	0.01%	0.17%	0.30%	2.9%	3.0%	5.9%
30		10.2	10.5	0.04	0.02	0.17	0.30	2.2	3.0	5.2
35		7.9	8.1	0.07	0.03	0.21	0.30	1.6	3.0	4.6
40		5.6	5.7	0.09	0.04	0.26	0.32	1.2	3.0	4.2
45		4.2	4.3	0.12	0.07	0.34	0.38	0.9	3.0	3.9
50		2.8	2.9	0.16	0.10	0.49	0.57	0.7	3.0	3.7
55		2.8	2.9	0.27	0.19	1.07	0.89	0.5	3.0	3.5
60		2.8	2.9	0.52	0.37	1.50	1.50	0.4	3.0	3.4
65		2.8	2.9	1.02	0.72	1.60	1.70	0.3	3.0	3.3
70		2.8	2.9	1.74	1.24	1.60	1.70	0.2	3.0	3.2

* *Does not apply to elected officials and legislators.*

** *2% of the deaths in active service are assumed to be duty-related.*

*** *Does not apply to members of the General Assembly.*

SUMMARY OF ACTUARIAL ASSUMPTIONS

MSEP - Percent of Eligible Active Members Retiring Next Year | June 30, 2015

	Normal Retirement Pattern				Early Retirement Pattern		
	MSEP and MSEP 2000*			MSEP 2011**		MSEP*	MSEP 2011**
	Percent Eligible						
Retirement Age	1st Year	2nd Year	3rd Year	Percent Eligible	Retirement Age	Percent Eligible	Percent Eligible
48	22%						
49	22	10%					
50	22	10	21%				
51	22	10	21				
52	22	10	21				
53	22	10	18				
54	22	10	18				
55	22	12	26	45%			
56	22	12	25	45			
57	22	12	22	35	57	2.5%	
58	22	12	22	35	58	3.5	
59	22	12	20	30	59	3.5	
60	21	12	22	35	60	5	
61	20	12	20	25	61	6	
62	19	22	30	40	62	6	10%
63	15	18	25	30	63	6	10
64	15	20	17	20	64	6	10
65	20	20	27	30	65	6	50
66	22	20	26	25	66	6	50
67	15	25	22	20	67	6	
68	15	20	22	20	68	6	
69	15	20	22	20	69	6	
70	25	20	22	20	70	6	
71	25	20	22	20	71	6	
72	25	20	22	20	72	6	
73	25	20	22	20	73	6	
74	25	20	22	20	74	6	
75	50	50	22	50	75	6	
76	50	50	22	50	76	6	
77	75	75	22	75	77	6	
78	100	100	100	100	78	100	

* *For members hired prior to January 1, 2011.*
** *For members hired on or after January 1, 2011.*

Elected Official and Legislators Percent of Active Members Separating Within the Next Year | June 30, 2015

	Withdrawal		Withdrawal
Years of Service	Men/Women	Years of Service	Men/Women
1	8.0%	5	12.0%
2	8.0	6	12.0
3	8.0	7	12.0
4	8.0	8+	35.0

Judicial Plan - Retirement Values | June 30, 2015

Sample Attained Ages	Present Value of $1/Month the First Year (with 50% Joint & Survivor) Increasing 4.0%/2.0% Yearly – Service – Men	Service – Women	Disability – Men	Disability – Women	Present Value of $1/Month the First Year Increasing 2.0% Yearly – Service – Men	Service – Women	Disability – Men	Disability – Women	Future Life Expectancy (Years) – Service – Men	Service – Women	Disability – Men	Disability – Women
40	$224.38	$223.90	$213.16	$211.47	$184.40	$186.75	$169.01	$172.32	41.95	44.10	32.39	34.43
45	217.58	216.73	203.19	200.83	177.68	180.43	157.94	162.08	37.15	39.24	27.68	29.69
50	208.75	207.44	190.84	187.67	169.01	172.32	144.49	149.76	32.39	34.43	23.13	25.13
55	197.38	195.60	176.09	171.92	157.94	162.08	128.94	135.56	27.68	29.69	18.87	20.84
60	183.27	181.03	159.02	153.70	144.49	149.76	111.76	119.87	23.13	25.13	14.96	16.90
65	166.45	163.79	139.51	133.14	128.94	135.56	92.72	102.82	18.87	20.84	11.39	13.32
70	147.12	144.11	118.57	110.55	111.76	119.87	73.10	84.62	14.96	16.90	8.29	10.12
75	125.29	122.34	97.88	87.30	92.72	102.82	55.15	66.19	11.39	13.32	5.83	7.37
80	102.13	99.32	78.52	66.77	73.10	84.62	40.28	50.49	8.29	10.12	4.03	5.31
85	79.74	76.76	61.89	51.78	55.15	66.19	30.32	40.10	5.83	7.37	2.91	4.05

Judicial Plan - Percent of Eligible Active Members Retiring Next Year | June 30, 2015

Normal Retirement Pattern – Retirement Age	Judicial Plan* Percent Eligible – Men	Judicial Plan* Percent Eligible – Women	Judicial Plan 2011** Percent Eligible – Men	Judicial Plan 2011** Percent Eligible – Women	Early Retirement Pattern – Retirement Age	Judicial Plan* Percent Eligible – Men	Judicial Plan* Percent Eligible – Women
55	15%	4%					
56	15	4					
57	15	4					
58	15	4					
59	5	4					
60	10	10					
61	5	10					
62	10	10	30%	35%	62	8%	4%
63	10	10	20	20	63	8	4
64	10	10	15	20	64	8	4
65	15	23	30	50	65	8	4
66	20	23	25	25	66	8	4
67	20	23	20	25	67	8	4
68	30	23	20	25	68	8	4
69	30	23	30	50	69	8	4
70	100	100	100	100	70	100	100

* *For members hired prior to January 1, 2011*
** *For members hired on or after January 1, 2011*

Judicial Plan - Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions | June 30, 2015

Sample Ages	Percent of Active Members Separating Within the Next Year – Death – Men	Death – Women	Disability – Men	Disability – Woman	Pay Increase Assumptions for an Individual Employee – Merit and Seniority	Base (Economy)	Increase Next Year	Percent of Active Members Separating Within the Next Year – Withdrawal – Service Index	Men	Women
25	0.03%	0.01%	0.01%	0.01%	2.2%	3.0%	5.2%	1	4.0%	4.0%
30	0.04	0.02	0.02	0.01	2.2	3.0	5.2	2	1.0	1.0
35	0.07	0.03	0.03	0.02	1.5	3.0	4.5	3	1.3	1.3
40	0.09	0.04	0.04	0.03	0.8	3.0	3.8	4	1.3	1.3
45	0.12	0.07	0.05	0.04	0.6	3.0	3.6	5	1.3	1.3
50	0.16	0.10	0.08	0.07	0.5	3.0	3.5	6-10	1.3	1.3
55	0.27	0.19	0.13	0.12	0.4	3.0	3.4	11-31	1.0	1.0
60	0.52	0.37	0.20	0.19	0.0	3.0	3.0			
65	1.02	0.72	0.20	0.19	0.0	3.0	3.0			

SUMMARY OF ACTUARIAL ASSUMPTIONS

Miscellaneous Technical Assumptions | June 30, 2015

Pay Increase Timing
Beginning of fiscal year.

Decrement Timing
Decrements of all types are assumed to occur mid-year.

Eligibility Testing
Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Benefit Service
Exact fractional service is used to determine the amount of the benefit payable.

Decrement Relativity
Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Operation
Disability and withdrawal do not operate during normal retirement eligibility.

Normal Form of Benefit
The assumed normal form of benefit is the straight life form for MSEP 2000 with 50% continuing to an eligible surviving spouse for MSEP. No adjustment has been made for post-retirement option election changes.

For judges, the assumed normal form of benefit is the straight life form, with 50% continuing to an eligible surviving spouse for members hired prior to January 1, 2011.

Other Liability Adjustments
MSEP 2000 Benefits for Active Employees
Option elections were studied for MSEP 2000 retirees and we believe that the normal and early retirement alternate forms of payment assumption are slightly negatively subsidized. We have adjusted the actuarial accrued liability and normal cost by a factor of 0.99 for MSEP 2000 and MSEP 2011 retirements and by .995 for MSEP retirements based on the current rate of form of payment elections.

Pre-Retirement Survivor Benefits for Spouse of Terminated-Vested Member

Age	Male	Female
<30	1.97	1.68
30-39	1.40	1.29
40-49	1.15	1.11
>50	1.04	1.03

Incidence of Contributions
Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

MSEP 2000 Election
All regular state employees hired on or before June 30, 2000, are assumed to elect MSEP 2000 prior to age 62 and MSEP on or after age 62. Elected Officials, General Assembly, and Uniformed Water Patrol Members hired before July 1, 2000, and Administrative Law Judges hired before April 26, 2005, are assumed to elect MSEP at retirement.

Service Adjustment
It is assumed that each member will be granted one-half year of service credit, three months for unused leave upon retirement and three months for military service purchases. For members hired on or after January 1, 2011, it is assumed that each member will be granted four months for unused leave.

Marriage Assumption

It is assumed that among active members 75% are married at retirement, 70% of those dying in active service are married, and men are three years older than their spouses.

For judges, it is assumed that among active members 70% are married at retirement, 70% of those dying in active service are married, and men are four years older than their spouses.

Forfeitures

For those hired on or after January 1, 2011, 50% of state employees terminating at first vesting eligibility are assumed to take a refund and forfeit their deferred pension. This percentage decreases to 0% at first retirement eligibility.

For judges, vested members are assumed not to take a refund of member contributions and forfeit their benefit upon separation from service.

Salary and Benefit Limits

For purposes of the valuation, no limits were applied to member compensation or benefits.

The number of active members is assumed to remain constant although certain new hires on or after July 1, 2002, will participate in the Colleges and Universities Retirement Plan. Active and retired member data is reported as of May 31, 2015. It is assumed for valuation purposes that there is no turnover among members and no new entrants during the month of June 2015. New entrant assumed demographic patterns are based on the demographics of active members hired within the last five years.

Data Adjustments

Active and retired member data was reported as of May 31, 2015. It was brought forward to June 30, 2015, by adding one month of service for all active members and the June COLA for certain retired members. It is expected that this procedure resulted in a slight overstatement of total liabilities as of June 30, 2015. Financial information continues to be reported as of June 30, 2015. This procedure was instituted to provide sufficient time for the board of trustees to certify the appropriate contribution rate prior to the October 1 statutory deadline.

Active members reported with less than a $100 annualized salary were assumed to receive the average active member pay, which is $38,351 ($103,689 for Administrative Law Judges) as of June 30, 2015. There were 18 members affected by this assumption.

For judges, active members reported with no annualized salary were assumed to receive the average active member pay, which is $137,423, as of June 30, 2015.

When the option of choosing plans is available, terminated vested members are reported with two records, one with benefits under the MSEP plan and one with benefits under the MSEP 2000 plan. Because it is unknown what the member will elect at retirement, both records are valued and the plan that produces the higher present value of future benefits is used for valuation purposes.

For any retired member who has elected a joint and survivor benefit yet has no beneficiary date of birth provided, it was assumed that the beneficiary is three years younger for male retirees and three years older for female retirees. For the terminated vested members, GRS staff found one member less than what was initially reported. This was confirmed with MOSERS' staff. For members reported with no gender, the member is assumed to be male.

For judges, for any retired member who has elected a joint and survivor benefit yet has no beneficiary date of birth provided, it was assumed that the beneficiary is four years younger for male retirees and four years older for female retirees.

Due to limitations in our valuation program, members who are not eligible for normal retirement prior to age 85 had their date of birth adjusted.

For the 2015 valuation, a one-time adjustment to the payroll growth from 3% to 0% is assumed for the year after the valuation date to reflect a planned pay freeze.

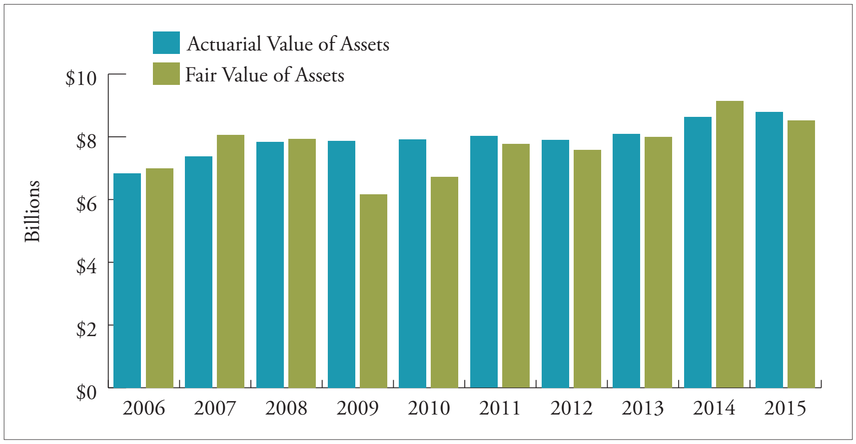
Actuarial Asset Value Smoothing

The financing objective of the vast majority of public retirement plans is to establish contribution rates and collect contributions which remain relatively level as a percent of active member payroll over decades of time. This concept is sometimes referred to as attempting to achieve intergenerational equity, meaning future generations will not be expected to pay more or less (in inflation adjusted terms) than the present generation contributes to support the plan.

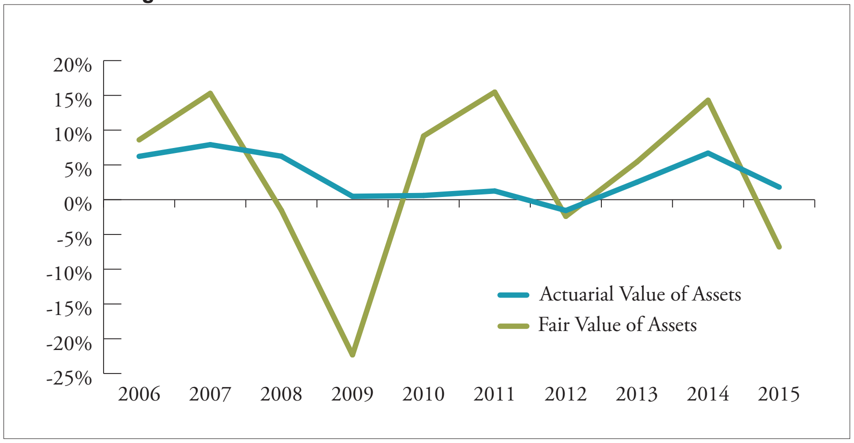
Some critics of smoothing the actuarial value of assets suggest that pension plans are not providing "transparency" in connection with operations. Actual practice suggests otherwise. The *Statements of Fiduciary Net Position* and *Changes in Fiduciary Net Position* in the *Financial Section* are prepared on the basis of fair market values. Beyond that, all information related to asset values and results of investment activity in the *Investment Section* of this report is prepared on the basis of fair market values. This is required by the accounting and reporting standards established by the Governmental Accounting Standards Board and by the Government Finance Officers Association's *Guidelines for the Preparation of a Comprehensive Annual Financial Report*. Both organizations have been long standing proponents of transparency in governmental accounting and reporting – public retirement plans commonly subscribe to the dictates of both.

Many public retirement plans have begun to emphasize use of asset classes that, by their nature, tend to be somewhat volatile in fair market value. This is being done with the objective of increasing long-term investment returns, thus providing increased benefit security for plan participants and lower contribution rates for taxpayers than would otherwise be the case. With fair market value accounting for contribution rate determination purposes, we could achieve more level contribution rates by employing lower volatility asset classes but the level contribution rate would be much higher than is the case with the higher return expectations we have as the result of taking on asset volatility risk.

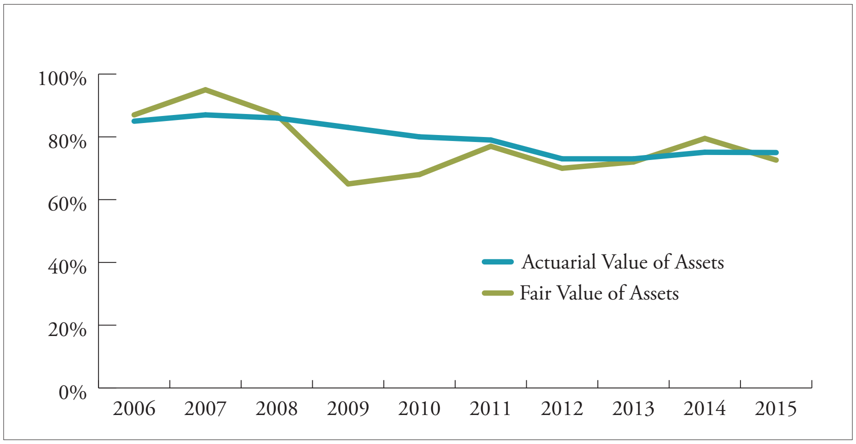
Asset Values



Percent Change in Asset Values



Percent Funded



When operating with a long-term time horizon, with contribution rate stability as a key objective, asset smoothing for actuarial purposes is simply a tool. Asset smoothing for actuarial purposes is a practical solution to responsibly achieving intergenerational equity, giving recognition to the fact that market cycles do not coincide with financial reporting periods. The use of the "market-related" value established through smoothing simply makes more sense for determining contribution rates than using fair market value. The charts above further illustrate the impact of smoothing volatility in actuarial computations.

Pension Trust Funds

Employer Schedule of Funding Progress | Last Ten Years

MOSERS uses the entry-age normal funding method. The entry-age normal actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's pensionable compensation between the entry age of the member and assumed exit ages.

MSEP

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Percent Funded (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll [(b-a)/c]
6/30/2006	$6,836,567,188	$ 8,013,205,414	$1,176,638,226	85.3%	$1,777,277,138	66.2%
6/30/2007	7,377,289,283	8,500,428,641	1,123,139,358	86.8	1,846,643,330	60.8
6/30/2008	7,838,495,768	9,128,347,470	1,289,851,702	85.9	1,916,527,398	67.3
6/30/2009	7,876,079,342	9,494,806,715	1,618,727,373	83.0	2,002,402,087	80.8
6/30/2010	7,923,377,393	9,853,155,445	1,929,778,052	80.4	1,945,095,321	99.2
6/30/2011	8,022,481,408	10,123,544,043	2,101,062,635	79.2	1,875,569,816	112.0
6/30/2012	7,897,167,203	10,793,651,577	2,896,484,374	73.2	1,864,069,493	155.4
6/30/2013	8,096,436,929	11,134,637,484	3,038,200,555	72.7	1,880,212,950	161.6
6/30/2014	8,637,758,955	11,494,571,835	2,856,812,880	75.1	1,902,719,928	150.1
6/30/2015	8,792,485,658	11,727,618,410	2,935,132,752	75.0	1,918,527,768	153.0

Judicial Plan

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Percent Funded (a/b)	Annual Covered Payroll (c)	UAAL Percentage of Covered Payroll [(b-a)/c]
6/30/2006	$ 51,652,867	$309,002,752	$257,349,885	16.7%	$40,270,535	639.1%
6/30/2007	61,903,516	326,666,373	264,762,857	19.0	40,846,581	648.2
6/30/2008	73,194,379	354,796,453	281,602,074	20.6	44,542,530	632.2
6/30/2009	81,337,881	369,106,841	287,768,960	22.0	45,505,512	632.4
6/30/2010	88,976,738	382,012,773	293,036,035	23.3	46,112,730	635.5
6/30/2011	98,398,628	393,484,589	295,085,961	25.0	45,888,020	643.1
6/30/2012	102,266,706	413,332,538	311,065,832	24.7	45,835,501	678.7
6/30/2013	111,140,339	435,378,358	324,238,019	25.5	48,697,726	665.8
6/30/2014	124,269,105	462,336,255	338,067,150	26.9	49,587,936	681.8
6/30/2015	134,349,908	482,969,311	348,619,403	27.8	55,656,457	626.4

Pension Trust Funds

Summary of Member Data Included in Valuations | June 30, 2015

Active Members

Valuation Group	Number	Payroll	Group Averages Salary	Group Averages Age (Yrs.)	Group Averages Service (Yrs.)
MSEP					
Regular state employees	47,066	$1,751,131,864	$ 37,206	45.2	10.9
Elected officials	6	659,968	109,995	46.7	7.7
Legislative clerks	18	659,474	36,637	61.0	22.2
Legislators	195	7,011,150	35,955	51.7	4.5
Uniformed water patrol	14	934,644	66,760	41.8	16.7
Conservation department	1,368	59,464,269	43,468	44.9	14.5
School-term salaried employees	1,286	95,866,793	74,546	57.1	21.4
Administrative law judges	27	2,799,606	103,689	57.9	21.6
Total MSEP group	49,980	$1,918,527,768	$ 38,386	45.5	11.2
Judicial Plan	405	$ 55,656,457	$137,423	56.3	11.7

Retired Lives

Type of Benefit Payment	Number	Annual Benefits	Group Averages Benefit	Group Averages Age (Yrs.)
MSEP				
Retirement	38,130	$596,510,261	$15,644	69.6
Disability	4	14,520	3,630	62.0
Survivor of active member	1,617	16,962,194	10,490	62.2
Survivor of retired member	3,213	37,379,043	11,634	75.1
Total MSEP group	42,964	$650,866,018	$15,149	69.7
Judicial Plan	539	$ 32,420,594	$60,150	75.5

Others

Group	Terminated-Vested	Leave of Absence	Long-Term Disability
MSEP	19,290	195	948
Judicial Plan	29	0	1

Active Members by Attained Age and Years of Service | June 30, 2015

MSEP

	Years of Service to Valuation Date							Totals	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
15-19	36							36	$ 823,265
20-24	1,700	3						1,703	47,021,889
25-29	3,895	521	1					4,417	139,045,658
30-34	2,848	1,732	441	13				5,034	175,912,619
35-39	1,970	1,514	1,429	424	11			5,348	197,378,413
40-44	1,581	1,177	1,247	1,426	362	13		5,806	222,341,686
45-49	1,452	1,079	1,085	1,406	1,117	480	24	6,643	263,160,509
50-54	1,404	1,137	1,173	1,338	1,063	1,054	435	7,604	308,515,686
55-59	1,096	1,040	1,075	1,302	921	814	563	6,811	277,953,489
60	169	155	207	257	159	137	94	1,178	49,910,681
61	167	172	174	198	125	127	70	1,033	43,737,866
62	126	162	154	201	137	94	65	939	39,285,782
63	98	125	159	177	92	78	85	814	35,159,127
64	85	99	140	130	102	56	79	691	29,571,024
65	48	89	102	100	78	65	60	542	23,763,667
66	39	68	78	67	63	38	40	393	18,683,360
67	24	55	49	44	21	19	27	239	10,731,373
68	20	42	51	37	23	23	26	222	10,731,838
69	16	29	30	32	17	8	23	155	7,188,431
70+	36	56	78	71	43	32	56	372	17,611,405
Totals	16,810	9,255	7,673	7,223	4,334	3,038	1,647	49,980	$1,918,527,768

While not used in the financial computations, the following group averages are computed and shown because of their general interest.
Group Averages: Age - 45.5 years • Service - 11.2 years • Annual pay - $38,386

Judicial Plan

	Years of Service to Valuation Date							Totals	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
25-29	1							1	$ 133,728
30-34	3							3	398,350
35-39	11							11	1,469,931
40-44	15	7						22	2,948,474
45-49	20	12	12	3				47	6,358,822
50-54	28	12	11	8	4			63	8,667,772
55-59	26	20	11	26	9	1		93	12,724,254
60	1	3	4	2	6	1	1	18	2,510,657
61	4	3	3	4	3	3	1	21	2,835,936
62	2	4	1	5	6	2	3	23	3,270,136
63	2	5	3	2	6	1		19	2,603,198
64	3	2	5	5	3		1	19	2,602,948
65		5	4			1	1	11	1,510,176
66	1		3	5	3	3	2	17	2,369,611
67		2	1	2	3		1	9	1,284,042
68		4	2	4	4	1		15	2,119,320
69		3	2	1	2	1	1	10	1,408,919
70			1		1	1		3	440,183
Totals	117	82	63	67	50	15	11	405	$55,656,457

While not used in the financial computations, the following group averages are computed and shown because of their general interest.
Group Averages: Age - 56.3 years • Service - 11.7 years • Annual pay - $137,423

Schedules of Active Member Valuation Data | Ten Years Ended June 30, 2015

MSEP

	Schedule of Active Member Valuation Data			
Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase In Average Pay
June 30, 2006	54,493	$1,777,277,138	$32,615	1.00%
June 30, 2007	54,363	1,846,643,330	33,969	4.15
June 30, 2008	54,542	1,916,527,398	35,139	3.44
June 30, 2009	55,057	2,002,402,087	36,370	3.50
June 30, 2010	53,478	1,945,095,321	36,372	0.01
June 30, 2011	51,660	1,875,569,816	36,306	(0.18)
June 30, 2012	51,332	1,864,069,493	36,314	0.02
June 30, 2013	50,833	1,880,212,950	36,988	1.86
June 30, 2014	50,621	1,902,719,928	37,588	1.62
June 30, 2015	49,980	1,918,527,768	38,386	2.12

Judicial Plan

	Schedule of Active Member Valuation Data			
Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase In Average Pay
June 30, 2006	394	$40,270,535	$102,209	0.12%
June 30, 2007	400	40,846,581	102,116	(0.09)
June 30, 2008	401	44,542,530	111,079	8.78
June 30, 2009	397	45,505,512	114,623	3.19
June 30, 2010	402	46,112,730	114,708	0.07
June 30, 2011	399	45,888,020	115,008	0.26
June 30, 2012	398	45,835,501	115,165	0.14
June 30, 2013	400	48,697,726	121,744	5.71
June 30, 2014	405	49,587,936	122,439	0.57
June 30, 2015	405	55,656,457	137,423	12.24

★ ★ ★ ★ ★

MOSERS is a very secure and strong system with professional staff devoted to providing “Excellent” customer service and secure investments to the members. While I am enjoying retirement, I miss the people that I worked with and can proudly say that I am a former employee and current retiree of the Missouri State Employees’ Retirement System.

— Betty Kinney, Retired Senior Communications Assistant

Years of Service: 1993 - 2013

Retirees and Beneficiaries Added and Removed | Ten Years Ended June 30, 2015*

MSEP

			Added to Rolls		Removed from Rolls	
Fiscal Year Ended	Classification	Benefit Type	Number	Annual Allowances	Number	Annual Allowances
June 30, 2009	General employees	Retirement	2,195	$37,338,992	852	$9,903,887
		Survivor of active	82	996,258	54	390,167
		Survivor of retired	251	3,077,466	110	827,564
		Disability	0	876	1	4,237
	Lincoln University - vested	Retirement	0	0	0	0
		Survivor of active	0	0	0	0
	Legislators	Retirement	21	746,414	8	120,396
		Survivor of active	0	5,137	1	14,128
		Survivor of retired	4	84,108	2	20,473
	Elected officials	Retirement	2	105,141	0	0
		Survivor of active	0	2,997	0	0
		Survivor of retired	0	1,274	0	0
	ALJs	Retirement	3	168,517	2	90,337
		Survivor of retired	2	57,238	1	27,354
June 30, 2010	General employees	Retirement	2,298	34,755,192	833	9,979,318
		Survivor of active	83	1,054,292	49	276,401
		Survivor of retired	246	3,080,424	117	1,078,265
		Disability	0	830	1	2,985
	Lincoln University - vested	Retirement	1	5,671	0	0
		Survivor of active	0	0	0	0
	Legislators	Retirement	12	201,562	12	239,880
		Survivor of active	0	3,975	1	16,709
		Survivor of retired	5	78,765	0	0
	Elected officials	Retirement	0	0	1	66,911
		Survivor of active	0	3,117	0	0
		Survivor of retired	1	34,780	0	0
	ALJs	Retirement	3	113,877	1	46,794
		Survivor of active	0	0	0	0
		Survivor of retired	0	7,332	0	0
June 30, 2011	General employees	Retirement	2,850	41,203,358	892	10,670,476
		Survivor of active	65	914,689	46	261,503
		Survivor of retired	298	3,059,195	176	1,670,990
		Disability	0	79	1	1,732
	Lincoln University - vested	Retirement	1	1,780	0	0
		Survivor of active	0	0	0	0
	Legislators	Retirement	41	601,171	10	185,635
		Survivor of active	0	2,903	1	19,612
		Survivor of retired	5	73,841	2	16,628
	Elected officials	Retirement	0	0	0	0
		Survivor of active	0	3,242	0	0
		Survivor of retired	0	1,053	0	0
	ALJs	Retirement	4	212,519	0	0
		Survivor of active	0	0	0	0
		Survivor of retired	0	2,599	1	27,724
June 30, 2012	General employees	Retirement	2,637	$39,423,910	895	$11,116,063
		Survivor of active	82	1,129,634	34	197,452
		Survivor of retired	282	3,665,503	158	1,416,283
		Disability	0	458	0	0
	Lincoln University - vested	Retirement	0	0	2	11,032
		Survivor of active	0	0	0	0
	Legislators	Retirement	13	229,979	8	139,545
		Survivor of active	0	3,531	0	0
		Survivor of retired	4	80,142	3	52,550
	Elected officials	Retirement	2	86,431	0	0
		Survivor of active	0	3,371	0	0
		Survivor of retired	0	1,336	0	0
	ALJs	Retirement	3	124,248	3	158,072
		Survivor of active	1	25,592	0	0
		Survivor of retired	2	57,704	0	0

** Schedule is intended to show information for10 years. Additional years will be displayed as they become available.*

Source of Data: MOSERS benefit payment database as of June 30, 2015.
Other Actuarial Section information reported based on MOSERS data as of May 31, 2015.

Rolls at End of Year				
Number	Annual Allowances	Percentage Increase (Decrease) in Annual Allowances	Average Annual Allowances	Percentage Increase (Decrease) in Average Annual Allowances
27,942	$425,200,398	6.90%	$15,217	1.76%
1,364	12,095,246	5.28	8,867	3.10
2,259	22,538,130	11.09	9,977	4.15
10	33,055	(9.23)	3,306	(0.15)
13	55,953	0.00	4,304	0.00
1	2,624	0.00	2,624	0.00
262	5,207,953	13.66	19,878	8.03
13	146,210	(5.79)	11,247	1.45
56	771,979	8.98	13,785	5.09
14	620,135	20.42	44,295	3.21
1	77,924	4.00	77,924	4.00
1	33,117	4.00	33,117	4.00
26	1,177,522	7.11	45,289	2.99
11	275,852	12.15	25,077	1.95
29,407	449,976,272	5.83	15,302	0.56
1,398	12,873,137	6.43	9,208	3.85
2,388	24,540,289	8.88	10,277	3.01
9	30,900	(6.52)	3,433	3.84
14	61,624	10.14	4,402	2.28
1	2,624	0.00	2,624	0.00
262	5,169,635	(0.74)	19,731	(0.74)
12	133,476	(8.71)	11,123	(1.10)
61	850,744	10.20	13,947	1.18
13	553,224	(10.79)	42,556	(3.93)
1	81,041	4.00	81,041	4.00
2	67,897	105.02	33,949	2.51
28	1,244,605	5.70	44,450	(1.85)
0	0	0.00	0	0.00
11	283,184	2.66	25,744	2.66
31,365	480,509,154	6.79	15,320	0.12
1,417	13,526,323	5.07	9,546	3.67
2,510	25,928,494	5.66	10,330	0.52
8	29,247	(5.35)	3,656	6.50
15	63,404	2.89	4,227	(3.98)
1	2,624	0.00	2,624	0.00
293	5,585,171	8.04	19,062	(3.39)
11	116,767	(12.52)	10,615	(4.57)
64	907,957	6.73	14,187	1.72
13	553,224	0.00	42,556	0.00
1	84,283	4.00	84,283	4.00
2	68,950	1.55	34,475	1.55
32	1,457,124	17.08	45,535	2.44
0	0	0.00	0	0.00
10	258,059	(8.87)	25,806	0.24
33,107	$508,817,001	5.89%	$15,369	0.32%
1,465	14,458,505	6.89	9,869	3.38
2,634	28,177,714	8.67	10,698	3.56
8	29,705	1.57	3,713	1.56
13	52,372	(17.40)	4,029	(4.68)
1	2,624	0.00	2,624	0.00
298	5,675,605	1.62	19,046	(0.08)
11	120,298	3.02	10,936	3.02
65	935,549	3.04	14,393	1.45
15	639,655	15.62	42,644	0.21
1	87,654	4.00	87,654	4.00
2	70,286	1.94	35,143	1.94
32	1,423,300	(2.32)	44,478	(2.32)
1	25,592	0.00	25,592	0.00
12	315,763	22.36	26,314	1.97

Retirees and Beneficiaries Added and Removed continued on pages 106-107.

Retirees and Beneficiaries Added and Removed continued from pages 104-105.

MSEP

Fiscal Year Ended	Classification	Benefit Type	Added to Rolls Number	Added to Rolls Annual Allowances	Removed from Rolls Number	Removed from Rolls Annual Allowances
June 30, 2013	General employees	Retirement	2,632	40,416,533	983	12,869,826
		Survivor of active	97	1,080,366	64	400,983
		Survivor of retired	323	4,085,887	150	1,363,799
		Disability	0	696	1	3,854
	Lincoln University - vested	Retirement	2	5,980	0	0
		Survivor of active	0	0	0	0
	Legislators	Retirement	37	442,937	15	320,292
		Survivor of active	0	3,851	0	0
		Survivor of retired	9	176,283	6	88,725
	Elected officials	Retirement	1	53,873	0	0
		Survivor of active	0	3,506	0	0
		Survivor of retired	0	1,458	0	0
	ALJs	Retirement	4	233,124	2	111,466
		Survivor of active	0	1,024	0	0
		Survivor of retired	2	65,892	1	22,759
June 30, 2014	General employees	Retirement	2,612	37,411,991	944	12,205,892
		Survivor of active	90	1,095,464	34	262,401
		Survivor of retired	324	3,954,360	157	1,504,423
		Disability	0	408	2	7,391
	Lincoln University - vested	Retirement	0	0	0	0
		Survivor of active	0	0	0	0
	Legislators	Retirement	18	239,904	7	95,748
		Survivor of active	0	3,680	0	0
		Survivor of retired	5	39,520	5	44,445
	Elected officials	Retirement	0	0	1	19,605
		Survivor of active	0	2,788	0	0
		Survivor of retired	1	10,811	0	0
	ALJs	Retirement	1	50,072	2	78,138
		Survivor of active	1	27,358	0	0
		Survivor of retired	0	7,404	1	30,930
June 30, 2015	General employees	Retirement	2,865	43,527,132	1,061	13,940,436
		Survivor of active	111	1,160,798	56	434,928
		Survivor of retired	350	4,399,848	180	1,673,736
		Disability	0	180	1	5,220
	Lincoln university - vested	Retirement	1	2,340	0	0
		Survivor of active	0	0	0	0
	Legislators	Retirement	16	236,916	4	130,116
		Survivor of active	0	3,432	1	15,180
		Survivor of retired	3	61,956	9	79,944
	Elected officials	Retirement	0	0	0	0
		Survivor of active	1	15,802	0	0
		Survivor of retired	0	0	0	0
	ALJs	Retirement	3	128,952	0	0
		Survivor of active	0	1,452	0	0
		Survivor of retired	0	6,612	0	0

* *Schedule is intended to show information for10 years. Additional years will be displayed as they become available.*

Source of Data: MOSERS benefit payment database as of June 30, 2015.
Other Actuarial Section information reported based on MOSERS data as of May 31, 2015.

Rolls at End of Year				
Number	Annual Allowances	Percentage Increase (Decrease) in Annual Allowances	Average Annual Allowances	Percentage Increase (Decrease) in Average Annual Allowances
34,756	536,363,708	5.41	15,432	0.41
1,498	15,137,889	4.70	10,105	2.39
2,807	30,899,802	9.66	11,008	2.90
7	26,546	(10.63)	3,792	2.13
15	58,351	11.42	3,890	(3.45)
1	2,623	(0.04)	2,623	(0.04)
320	5,798,251	2.16	18,120	(4.86)
11	124,149	3.20	11,286	3.20
68	1,023,107	9.36	15,046	4.54
16	693,528	8.42	43,346	1.65
1	91,160	4.00	91,160	4.00
2	71,744	2.07	35,872	2.07
34	1,544,957	8.55	45,440	2.16
1	26,615	4.00	26,615	4.00
13	358,896	13.66	27,607	4.91
36,424	561,569,807	4.70	15,418	(0.09)
1,554	15,970,952	5.50	10,277	1.70
2,974	33,349,739	7.93	11,214	1.87
5	19,563	(26.31)	3,913	3.19
15	58,351	0.00	3,890	0.00
1	2,623	0.00	2,623	0.00
331	5,942,407	2.49	17,953	(0.92)
11	127,829	2.96	11,621	2.97
68	1,018,182	(0.48)	14,973	(0.49)
15	673,923	(2.83)	44,928	3.65
1	93,948	3.06	93,948	3.06
3	82,555	15.07	27,518	(23.29)
33	1,516,891	(1.82)	45,966	1.16
2	53,973	102.79	26,987	1.40
12	335,370	(6.56)	27,948	1.24
38,227	591,156,503	5.27	15,464	0.30
1,608	16,696,822	4.54	10,384	1.04
3,144	36,075,851	8.17	11,475	2.33
4	14,523	(25.76)	3,631	(7.21)
16	60,691	4.01	3,793	(2.49)
1	2,623	0.00	2,623	0.00
339	6,049,207	1.80	17,844	(0.61)
10	116,081	(9.19)	11,608	(0.11)
66	1,000,194	(1.77)	15,154	1.21
15	673,923	0.00	44,928	0
2	109,750	16.82	54,875	(41.59)
3	82,555	0.00	27,518	0
36	1,645,843	8.50	45,718	(0.54)
2	55,425	2.69	27,713	2.69
12	341,982	1.97	28,499	1.97

Retirees and Beneficiaries Added and Removed | Ten Years Ended June 30, 2015*

Judicial Plan

		Added to Rolls		Removed from Rolls	
Fiscal Year Ended	Benefit Type	Number	Annual Allowances	Number	Annual Allowances
June 30, 2009	Retirement	30	$1,922,615	15	$957,943
	Survivor of active	1	59,484	0	0
	Survivor of retired	9	418,266	2	61,344
June 30, 2010	Retirement	12	1,137,305	13	750,021
	Survivor of active	0	32,700	2	32,399
	Survivor of retired	11	436,312	5	130,920
June 30, 2011	Retirement	36	2,501,248	9	563,214
	Survivor of active	0	14,893	1	35,792
	Survivor of retired	4	167,535	9	206,465
June 30, 2012	Retirement	18	1,490,554	14	1,074,572
	Survivor of active	0	22,717	0	0
	Survivor of retired	8	371,622	6	218,310
June 30, 2013	Retirement	27	2,233,387	13	851,802
	Survivor of active	0	28,591	1	33,778
	Survivor of retired	8	355,101	10	288,980
June 30, 2014	Retirement	18	1,671,667	8	443,807
	Survivor of active	2	66,272	0	0
	Survivor of retired	5	254,117	7	216,813
June 30, 2015	Retirement	39	3,599,880	21	1,395,888
	Survivor of active	0	34,344	0	0
	Survivor of retired	18	705,444	5	198,348

** Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Rolls at End of Year				
Number	Annual Allowances	Percentage Increase (Decrease) in Annual Allowances	Average Annual Allowances	Percentage Increase (Decrease) in Average Annual Allowances
326	$19,624,545	5.17%	$60,198	0.33%
37	1,056,425	5.97	28,552	3.10
103	3,139,829	12.83	30,484	5.16
325	20,011,829	1.97	61,575	2.29
35	1,056,726	0.03	30,192	5.74
109	3,445,221	9.73	31,608	3.69
352	21,949,863	9.68	62,358	1.27
34	1,035,827	(1.98)	30,466	0.91
104	3,406,291	(1.13)	32,753	3.62
356	22,365,845	1.90	62,825	0.75
34	1,058,544	2.19	31,134	2.19
106	3,559,603	4.50	33,581	2.53
370	23,747,431	6.18	64,182	2.16
33	1,053,358	(0.49)	31,920	2.52
104	3,625,723	1.86	34,863	3.82
380	24,975,291	5.17	65,724	2.40
35	1,119,630	6.29	31,989	0.22
102	3,663,027	1.03	35,912	3.01
398	25,951,423	9.28	65,205	1.59
35	1,087,702	3.26	31,077	(2.64)
115	4,132,819	13.99	35,938	3.08

Short-Term Solvency Test | Ten Years Ended June 30, 2015

MSEP

	Actuarial Accrued Liabilities for				Percentage of Actuarial Liabilities Covered by Actuarial Value of Assets Available for		
Fiscal Year	Member Contributions (1)	Current Retirees and Beneficiaries (2)	Active and Inactive Members, Employer Financed Portion (3)	Actuarial Value of Assets Available for Benefits	(1)	(2)	(3)
2006	$ 0	$3,876,349,145	$4,136,856,269	$6,836,567,188	100.0%	100.0%	71.6%
2007	0	4,208,621,537	4,291,807,104	7,377,289,283	100.0	100.0	73.8
2008	0	4,408,682,437	4,719,665,033	7,838,495,768	100.0	100.0	72.7
2009	0	4,737,859,976	4,756,946,739	7,876,079,342	100.0	100.0	66.0
2010	0	5,012,677,769	4,840,477,676	7,923,377,393	100.0	100.0	60.1
2011	67,126	5,357,794,617	4,765,682,300	8,022,481,408	100.0	100.0	55.9
2012	706,422	5,749,411,068	5,043,534,087	7,897,167,203	100.0	100.0	42.6
2013	1,504,901	6,062,654,441	5,070,478,142	8,096,436,929	100.0	100.0	40.1
2014	2,133,130	6,347,728,717	5,144,706,988	8,637,758,955	100.0	100.0	44.5
2015	2,452,605	6,695,661,737	5,029,504,068	8,792,485,658	100.0	100.0	41.6

Judicial Plan

	Actuarial Accrued Liabilities for				Percentage of Actuarial Liabilities Covered by Actuarial Value of Assets Available for		
Fiscal Year	Member Contributions (1)	Current Retirees and Beneficiaries (2)	Active and Inactive Members, Employer Financed Portion (3)	Actuarial Value of Assets Available for Benefits	(1)	(2)	(3)
2006	$ 0	$171,677,032	$137,325,720	$ 51,652,867	100.0%	30.1%	0.0%
2007	0	199,489,503	127,176,870	61,903,516	100.0	31.0	0.0
2008	0	216,369,879	138,426,574	73,194,379	100.0	33.8	0.0
2009	0	231,505,591	137,601,250	81,337,881	100.0	35.1	0.0
2010	0	236,113,077	145,899,696	88,976,738	100.0	37.7	0.0
2011	284	251,532,354	141,951,951	98,398,628	100.0	39.1	0.0
2012	795	258,642,149	154,689,594	102,266,706	100.0	39.5	0.0
2013	2,924	274,911,416	160,464,018	111,140,339	100.0	40.4	0.0
2014	5,717	285,124,436	177,206,102	124,269,105	100.0	43.6	0.0
2015	8,691	316,042,514	166,918,106	134,349,908	100.0	42.5	0.0

Derivation of Experience Gain (Loss) | Year Ended June 30, 2015

Actual experience will never coincide exactly with assumed experience (except by coincidence). Gains and losses may offset each other over a period of years, but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

MSEP

	$ Millions	Valuation Date June 30	Actuarial Gain (Loss) as a % of Beginning Accrued Liabilities
(1) Unfunded actuarial accrued liability (UAAL) at beginning of year	$2,856.8	2006	(0.1)%
(2) Normal cost from last valuation	157.5	2007	1.0
(3) Actual employer contributions	349.7	2008	0.1
(4) Interest accrual: (1)x.08+[(2)-(3)]x(.08/2)	220.9	2009	(5.2)
(5) Expected UAAL before changes: (1)+(2)-(3)+(4)	2,885.5	2010	(4.0)
(6) Change from any changes in benefits, assumptions, or methods	(57.6)	2011	(2.4)
(7) Expected UAAL after changes: (5)+(6)	2,827.9	2012	(4.7)
(8) Actual UAAL at end of year	2,935.1	2013	(2.8)
(9) Gain (loss) (7)-(8)	(107.2)	2014	2.1
(10) Gain (loss) as a percent of actuarial accrued liabilities at start of year ($11,495)	(0.9)%	2015	(0.9)

Judicial Plan

$ Millions		Valuation Date June 30	Actuarial Gain (Loss) as a % of Beginning Accrued Liabilities
(1) Unfunded actuarial accrued liability (UAAL) at beginning of year	$338.1	2006	(1.1)%
(2) Employer normal cost middle of year	10.0	2007	(0.6)
(3) Employer contributions	32.7	2008	(3.0)
(4) Interest		2009	(1.8)
a. on (1)	27.0	2010	(1.1)
b. on (2)	0.4	2011	(0.4)
c. on (3)	1.3	2012	(0.6)
d. total [a+b-c]	26.1	2013	(2.6)
(5) Expected UAAL end of year before changes	341.5	2014	1.5
(6) Change in UAAL end of year		2015	(1.5)
a. amendments	0.0		
b. assumptions (pay freeze)	0.0		
c. methods	0.0		
d. total	0.0		
(7) Expected UAAL after changes: (5)+(6d.)	341.5		
(8) Actual UAAL at end of year	348.6		
(9) Gain (loss) (7)-(8)	(7.1)		
(10) Gain (loss) as a percent of actuarial accrued liabilities at start of year ($462.3)	(1.5)%		

Comparison of Plans for General State Employees | June 30, 2015

MSEP • MSEP 2000 • MSEP 2011

Benefit Provisions	MSEP
Membership eligibility	• Members who work in a permanent position normally requiring at least 1,040 hours of work a year.
Vesting	• 5 years
Base benefit formula	• .016 x FAP x service *In the past, formula increases have been passed along to MSEP retirees.*
Temporary benefit formula	• Not available
Benefit payment options	• Life income annuity • *Unreduced* joint & 50% survivor • Joint & 100% survivor • Life income with 60 guaranteed payments • Life income with 120 guaranteed payments
Cost-of-living adjustment (COLA)	• If hired before August 28, 1997, will receive 4-5% each year until reaching the 65% cap. After COLA cap, the rate is based on 80% of the percentage increase in the CPI (0-5%). • If hired on or after August 28, 1997, annual COLA will be based on 80% of the percentage increase in the CPI (0-5%).
Normal retirement eligibility	• Age 65 with 5 years of service • Age 60 with 15 years of service "Rule of 80"- at least age 48 with age and service equaling 80 or more *Age 50 if first became eligible prior to August 28, 2003*
Early retirement eligibility	• Age 55 with 10 years of service *Base benefit will be reduced ½ of 1% (.005) for each month member's age is younger than normal retirement.*
Death before retirement	• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement).* – Survivor benefit to eligible spouse or children no less than 50% of average compensation.
In-service COLA	• COLA given for service beyond age 65. COLA provisions are determined by employment date.
BackDROP	• Must work at least two years beyond normal retirement eligibility to be eligible for BackDROP.
Service purchases	• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate. May also purchase qualifying public sector service at full actuarial cost.
Service transfers	• May transfer state service to other positions covered by MOSERS under 104.800.
Member contributions	• None

MSEP 2000	MSEP 2011
• Members hired for the first time on or after July 1, 2000, in a permanent position normally requiring at least 1,040 hours of work a year. • Members who left state employment prior to becoming vested and returned to work on or after July 1, 2000, in a permanent position normally requiring at least 1,040 hours of work a year.	• Members hired for the first time on or after January 1, 2011, in a permanent position normally requiring at least 1,040 hours of work a year.
• 5 years	• 10 years
• .017 x FAP x service *Future formula increases, if any, will not be passed along to retirees.*	• .017 x FAP x service *Future formula increases, if any, will not be passed along to retirees.*
• .008 x FAP x service *Available to those who retire under the "Rule of 80."*	• .008 x FAP x service *Available to those who retire under the "Rule of 90."*
• Life income annuity • Joint & 50% survivor • Joint & 100% survivor • Life income with 120 guaranteed payments • Life income with 180 guaranteed payments	• Life income annuity • Joint & 50% survivor • Joint & 100% survivor • Life income with 120 guaranteed payments • Life income with 180 guaranteed payments
• Based on 80% of the percentage increase in the CPI (0-5%).	• Based on 80% of the percentage increase in the CPI (0-5%).
• Age 62 with 5 years of service "Rule of 80" - at least age 48 with age and service equaling 80 or more *Age 50 if first became eligible prior to August 28, 2003* *Terminated-vested members not eligible for "Rule of 80."*	• Age 67 with 10 years of service • "Rule of 90" - at least age 55 with age and service equaling 90 or more *Terminated-vested members not eligible for "Rule of 90."*
• Age 57 with 5 years of service *Base benefit will be reduced ½ of 1% (.005) for each month member's age is younger than normal retirement.*	• Age 62 with 10 years of service *Base benefit will be reduced ½ of 1% (.005) for each month member's age is younger than normal retirement.* *Terminated-vested members are not eligible.*
• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement).* – Survivor benefit to eligible spouse or children no less than 50% of average compensation.	• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement).* – Survivor benefit to eligible spouse or children no less than 50% of average compensation.
• Not available	• Not available
• Must work at least two years beyond normal retirement eligibility to be eligible for BackDROP.	• Not available
• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate. May also purchase qualifying public sector service at full actuarial cost.	• May purchase qualifying public sector service at full actuarial cost.
• May transfer service under 104.1090 from other systems with written agreements to transfer required funds.	• Not available
• None	• 4% of pay

Comparison of Plans for Legislators | June 30, 2015

MSEP • MSEP 2000 • MSEP 2011

Benefit Provisions	MSEP
Membership eligibility	• Elected to the General Assembly
Vesting	• 3 full-biennial assemblies (6 years)
Base benefit formula	• Biennial assemblies x $150 *In the past, formula increases have been passed along to MSEP retirees.*
Temporary benefit formula	• Not available
Benefit payment options	• Life income annuity • *Unreduced* joint & 50% survivor • Joint & 100% survivor • Life income with 60 guaranteed payments • Life income with 120 guaranteed payments
Cost-of-living adjustment (COLA)	• If sworn in before August 28, 1997, will receive 4-5% each year until reaching 65% cap. After COLA cap, the rate is based on 80% of the percentage increase in the CPI (0-5%). • If sworn in on or after August 28, 1997, COLA will be based on 80% of the percentage increase in the CPI (0-5%).
Normal retirement eligibility	• Age 55 with 3 full-biennial assemblies or • "Rule of 80" - at least age 48 with age and service equaling 80 or more
Early retirement eligibility	• Not available
Death before retirement	• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement)* – Survivor benefit to eligible spouse or children no less than 50% of the rate of compensation.
In-service COLA	• COLA given for service beyond age 65. COLA provisions are determined by employment date.
BackDROP	• Not available
Service purchases	• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate. May also purchase qualifying public sector service at full actuarial cost.
Service transfers	• May transfer state service to other positions covered by MOSERS under 104.800.
Member contributions	• None

MSEP 2000	MSEP 2011
• Elected to the General Assembly on or after July 1, 2000	• Elected to the General Assembly on or after January 1, 2011
• 3 full-biennial assemblies (6 years)	• 3 full-biennial assemblies (6 years)
• (Active legislator's pay ÷ 24) x service *Capped at 100% of pay; future formula increases, if any, will not be passed along to retirees.*	• (Active legislator's pay ÷ 24) x service *Capped at 100% of pay; future formula increases, if any, will not be passed along to retirees.*
• Not available	• Not available
• Life income annuity • Joint & 50% survivor • Joint & 100% survivor • Life income with 120 guaranteed payments • Life income with 180 guaranteed payments	• Life income annuity • Joint & 50% survivor • Joint & 100% survivor • Life income with 120 guaranteed payments • Life income with 180 guaranteed payments
• Benefit adjustment based on increase in pay for an active member of the general assembly.	• Benefit adjustment based on increase in pay for an active member of the general assembly.
• Age 55 with 3 full-biennial assemblies or • "Rule of 80" - at least age 50 with age and service equaling 80 or more	• Age 62 with 3 full-biennial assemblies or • "Rule of 90" - at least age 55 with age and service equaling 90 or more
• Not available	• Not available
• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement)* – Survivor benefit to eligible spouse or children no less than 50% of rate of compensation.	• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement)* – Survivor benefit to eligible spouse or children no less than 50% of rate of compensation.
• Not available	• Not available
• Not available	• Not available
• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate. May also purchase qualifying public sector service at full actuarial cost.	• May purchase qualifying public sector service at full actuarial cost.
• May transfer service under 104.1090 from other systems with written agreements to transfer required funds.	• Not available
• None	• 4% of pay

Comparison of Plans for Statewide Elected Officials | June 30, 2015

MSEP • MSEP 2000 • MSEP 2011

Benefit Provisions	MSEP
Membership eligibility	• Elected to state office
Vesting	• 4 years (1 term)
Base benefit formula	• Less than 12 years of service FAP x .016 x service • 12 or more years of service Monthly statutory compensation x .50 *In the past, formula increases have been passed along to MSEP retirees.*
Temporary benefit formula	• Not available
Benefit payment options	• Life income annuity • *Unreduced* joint & 50% survivor • Joint & 100% survivor • Life income with 60 guaranteed payments • Life income with 120 guaranteed payments
Cost-of-living adjustment (COLA)	• Less than 12 years of service – Statewide elected officials sworn in before August 28, 1997 will receive 4-5% each year until they reach 65% cap. After COLA cap, the rate is based on 80% of the percentage increase in the CPI (0-5%). – Statewide elected officials sworn in between August 28, 1997 and June 30, 2000, will receive a COLA equal to 80% of percentage increase in the CPI (0-5%). • 12 or more years of service – Statewide elected officials with 12 or more years of service will receive a COLA based on increases in statutory compensation for the highest position held. – Statewide elected officials sworn in before August 28, 1997 will receive 4-5% each year until they reach 65% cap. After COLA cap, the rate is based on 80% of the percentage increase in the CPI (0-5%). – Statewide elected officials sworn in between August 28, 1997 and June 30, 2000, will receive a COLA equal to 80% of percentage increase in the CPI (0-5%).
Normal retirement eligibility	• Age 60 with 15 years of service or • "Rule of 80" - at least age 50 with age and service equaling 80 or more
Early retirement eligibility	• Age 55 with 10 years of service
Death before retirement	• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement)* – Survivor benefit to eligible spouse or children no less than 50% of current pay.
In-service COLA	• COLA provisions determined by amount of service relative to 12 years and date of employment.
BackDROP	• Not available
Service purchases	• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate. May also purchase qualifying public sector service at full actuarial cost.
Service transfers	• May transfer state service to other positions covered by MOSERS under 104.800.
Member contributions	• None

MSEP 2000	MSEP 2011
• First employed on or after July 1, 2000	• First employed on or after January 1, 2011
• 4 years (1 term)	• 4 years (1 term)
• (Active elected official's pay ÷ 24) x service *Capped at 12 years of service or 50% of pay; future formula increases, if any, will not be passed along to retirees.*	• (Active elected official's pay ÷ 24) x service *Capped at 12 years of service or 50% of pay; future formula increases, if any, will not be passed along to retirees.*
• Not available	• Not available
• Life income annuity • Joint & 50% survivor • Joint & 100% survivor • Life income with 120 guaranteed payments • Life income with 180 guaranteed payments	• Life income annuity • Joint & 50% survivor • Joint & 100% survivor • Life income with 120 guaranteed payments • Life income with 180 guaranteed payments
• Benefit adjustment based on increase in pay for an active statewide elected official.	• Benefit adjustment based on increase in pay for an active statewide elected official.
• Age 55 with 4 years of service or • "Rule of 80" - at least age 50 with age and service equaling 80 or more	• Age 62 with 4 years of service or • "Rule of 90" - at least age 55 with age and service equaling 90 or more
• Not available	• Not available
• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement)* – Survivor benefit to eligible spouse or children no less than 50% of current pay.	• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement)* – Survivor benefit to eligible spouse or children no less than 50% of current pay.
• Not available	• Not available
• Not available	• Not available
• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate; may also purchase qualifying public sector service at full actuarial cost.	• May purchase qualifying public sector service at full actuarial cost.
• May transfer service under 104.1090 from other systems with written agreements to transfer required funds.	• Not available
• None	• 4% of pay

Comparison of Plans for Judges | June 30, 2015

Judicial Plan • Judicial Plan 2011

Benefit Provisions	Judicial Plan
Membership eligibility	• Must be a judge or commissioner of the supreme court or the court of appeals, a judge of the circuit court, probate court, magistrate court, court of common pleas, court of criminal corrections, a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972; a commissioner of the juvenile division of the circuit court appointed pursuant to Section 211.023, RSMo; a commissioner of the drug court pursuant to Section 478.466, RSMo; or a commissioner of the family court.
Vesting	• Immediate
Base benefit formula	• Monthly pay x .50 = monthly base benefit
Temporary benefit formula	• Not available
Benefit payment options	• Life income annuity • Automatic *unreduced* joint and 50% survivor option *If married at least two continuous years immediately preceding judges death.*
Cost-of-living adjustment (COLA)	• If hired before August 28, 1997, will receive 4-5% each year until reaching 65% cap. After COLA cap, the rate is based on 80% of the percentage increase in the CPI (0-5%) • If hired on or after August 28, 1997, based on 80% of the percentage increase in the CPI (0-5%).
Normal retirement eligibility	• Age 62 with 12 years service • Age 60 with 15 years service • Age 55 with 20 years service
Reduced retirement eligibility	• Age 60 if less than 15 years service • Age 62 if less than 12 years service
Death before retirement	• Non duty-related death – Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70.
In-service COLA *Service beyond age 65*	• Judges who are at least age 60 and work beyond the date first eligible for unreduced benefits will receive COLAs for each year worked beyond normal retirement eligibility. COLA provisions are determined by date of employment.
BackDROP	• Not available
Service purchases	• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate. May also purchase qualifying public sector service at full actuarial cost.
Service transfers	• May transfer state service to other positions covered by MOSERS under 104.800.
Member contributions	• None

Judicial Plan 2011

- Must be a judge or commissioner of the supreme court or the court of appeals, a judge of the circuit court, probate court, magistrate court, court of common pleas, court of criminal corrections, a justice of the peace, or a commissioner or deputy commissioner of the circuit court; a commissioner of the juvenile division of the circuit court appointed pursuant to Section 211.023, RSMo; a commissioner of the drug court pursuant to Section 478.466, RSMo; or a commissioner of the family court appointed or elected a judge for the first time on or after January 1, 2011.

- Immediate
- Monthly pay x .50 = monthly base benefit
- Not available
- Life income annuity
- Joint & 50% survivor
- Joint & 100% survivor
- Life income with 120 guaranteed payments
- Life income with 180 guaranteed payments
- Based on 80% of the percentage increase in the CPI (0-5%)
- Age 67 with 12 years service
- Age 62 with 20 years service
- Age 67 if less than 12 years service
- Age 62 if less than 20 years service
- Non duty-related death
  - Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70.
- Not available
- Not available
- May purchase qualifying public sector service at full actuarial cost.
- May transfer state service to other positions covered by MOSERS under 104.800.
- 4% of pay

Comparison of Plans for Uniformed Members of the Water Patrol | June 30, 2015

MSEP • MSEP 2000

Benefit Provisions	MSEP	MSEP 2000
Membership eligibility	• Members who work in a permanent position normally requiring at least 1,040 hours of work a year.	• Members hired for the first time on or after July 1, 2000, in a permanent position normally requiring at least 1,040 hours of work a year. • Members who left state employment prior to becoming vested and returned to work on or after July 1, 2000, in a permanent position normally requiring at least 1,040 hours of work a year.
Vesting	• 5 years of service	• 5 years of service
Base benefit formula	• 1.6% x FAP x service increased by 33.3%	• 1.7% x FAP x service
Temporary benefit formula	• Not available	• 0.8% x FAP x service *(must retire under "Rule of 80")*
Benefit payment options	• Life income annuity • *Unreduced* joint and 50% survivor • Joint & 100% survivor • 60 or 120 guaranteed payments	• Life income annuity • Joint & 50% survivor • Joint & 100% survivor • 120 or 180 guaranteed payments
Cost-of-living adjustment (COLA)	• If hired before August 28, 1997, will receive 4-5% each year until reaching 65% cap. After COLA cap, the rate is based on 80% of the percentage increase in the CPI (0-5%). • If hired on or after August 28, 1997, based on 80% of the percentage increase in the CPI (0-5%).	• Based on 80% of the percentage increase in the CPI (0-5%).
Normal retirement eligibility	• Age 55 and active with 4 years of service • Age 55 with 5 years of service • "Rule of 80"- minimum age 48	• Age 62 with 5 years of service • "Rule of 80" - minimum age 48
Early retirement eligibility	• Not available	• Age 57 with 10 years of service
Death before retirement	• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement)* – Survivor benefit to eligible spouse or children no less than 50% of current pay.	• Non duty-related death *(vested members)* – Survivor benefit to eligible spouse calculated using the joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children. • Duty-related death *(no minimum service requirement)* – Survivor benefit to eligible spouse or children no less than 50% of current pay.
In-service COLA	• COLA given for service beyond age 65. COLA provisions are determined by employment date.	• Not available
BackDROP	• Must work at least two years beyond normal retirement eligibility to be eligible for BackDROP.	• Must work at least two years beyond normal retirement eligibility to be eligible for BackDROP.
Service purchases	• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate. May also purchase qualifying public sector service at full actuarial cost.	• May purchase up to 4 years of active-duty military service or qualifying public sector service at subsidized rate. May also purchase qualifying public sector service at full actuarial cost.
Service transfers	• May transfer state service to other positions covered by MOSERS under 104.800.	• May transfer state service to other positions covered by MOSERS under 104.1090.
Member contributions	• None	• None

SUMMARY OF PLAN PROVISIONS

Life Insurance Plans | June 30, 2015

MOSERS administers basic and optional term life insurance plans for eligible state employees and retirees.

Active Members*

Plan Provision	Requirement
• **Basic life insurance** - An amount equal to one times annual salary (with a minimum of $15,000) while actively employed.	• Actively employed in an eligible state position resulting in membership in MOSERS.
• **Duty-related death benefit** - Duty-related death benefit equivalent to two times the annual salary the member was earning at the time of death in addition to the basic life insurance amount of one times annual salary.	• Actively employed in an eligible state position resulting in membership in MOSERS.
• **Optional life insurance** - Additional life insurance may be purchased in a flat amount in multiples of $10,000 not to exceed the maximum (lesser of six times annual salary or $800,000). Spouse coverage may be purchased in multiples of $10,000 up to a maximum of $100,000; however, the amount of spouse coverage cannot exceed the amount of optional life insurance coverage the member has purchased. Coverage for children is available in a flat amount of $10,000 per child.	• Actively employed in an eligible state position resulting in membership in MOSERS.

* *Terminating employees may convert coverage up to the amount they had as an active employee at individual rates.*

Retired Members

Plan Provision	Requirement
• **Basic life insurance at retirement** - $5,000 basic life insurance during retirement.	• Must retire directly from active employment.
• **Optional life insurance at retirement (MSEP)** - An employee may retain up to the lesser of $60,000 or the amount of optional life insurance coverage held at the time of retirement at the group rate and may convert any remaining basic and optional life insurance at individual rates. Coverage for spouse ends at member's retirement and may be converted at individual rates.	• Must retire directly from active employment.
• **Optional life insurance at retirement (MSEP 2000)** - Under "Rule of 80", an employee may retain the current amount of coverage prior to retirement until age 62 at which time coverage is reduced to $60,000, and may convert any remaining basic and optional life insurance at individual rates. Coverage for spouse ends at member's retirement and may be converted at individual rates.	• Must retire directly from active employment.
• **Optional life insurance at retirement (MSEP 2011)** - Under "Rule of 90", an employee may retain the current amount of coverage prior to retirement until age 62 at which time coverage is reduced to $60,000, and may convert any remaining basic and optional life insurance at individual rates. Coverage for spouse ends at member's retirement and may be converted at individual rates.	• Must retire directly from active employment.

Long-Term Disability (LTD) Plans | June 30, 2015

MOSERS administers the LTD Plan for eligible state employees who become disabled during active employment.

Active Members

Classification	Requirement
General state employees, legislators, and elected state officials - Members of MOSERS in a position normally requiring 1,040 hours of work a year are covered under the LTD plan, unless they work for a state agency which has its own LTD plan.	• Eligible participants receive 60% of their compensation minus primary social security, workers' compensation, and employer provided income. Benefits commence after 90 days of disability or when sick leave benefits are no longer payable, whichever occurs last. LTD benefits cease upon the earliest of (i) when disability ends, (ii) when the member is first eligible for normal retirement benefits or is receiving early retirement benefits, (iii) when the member returns to work, or (iv) upon a member's death.
Water patrol	• Uniformed members who are eligible for statutory occupational disability receive benefits equal to 50% of compensation with no offset for social security at the time of disability. For nonoccupational disabilities, eligible participants receive the same benefit as general employees.
Judges	• In addition to the disability benefits provided to general employees, judges also receive benefits under the state constitution. Participants receive 50% of salary until the current term expires.

Changes in Plan Provisions

There were no changes in the MSEP or Judicial benefit plan provisions this year.

Actuarial Present Values | June 30, 2015

MSEP

Actuarial Present Value June 30, 2015 for	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members			
Service retirement benefits based on services rendered before and likely to be rendered after valuation date	$4,667,118,800	$612,262,391	$ 4,054,856,409
Disability benefits likely to be paid to present active members who become totally and permanently disabled	135,858,173	85,642,349	50,215,824
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	94,514,730	22,245,790	72,268,940
Separation benefits likely to be paid to present active members	376,853,354	175,962,019	200,891,335
Refunds likely to be paid to present active members	43,945,823	41,493,218	2,452,605
Active member totals	$5,318,290,880	$937,605,767	4,380,685,113
Members on leave of absence & LTD			
Service retirement benefits based on service rendered before the valuation date			85,796,007
Terminated-vested members			
Service retirement benefits based on service rendered before the valuation date			565,475,553
Retired lives			6,694,962,539
BackDROP installment payments incurred, but not yet paid			699,198
Total actuarial accrued liability			11,727,618,410
Actuarial value of assets			8,792,485,658
Unfunded actuarial accrued liability			$ 2,935,132,752
Funded ratio			75.0%

Actuarial Present Values | June 30, 2015

Judicial Plan

Actuarial Present Value June 30, 2015 for	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities
Active members			
Service retirement benefits based on services rendered before and likely to be rendered after valuation date	$218,119,637	$61,825,603	$156,294,034
Disability benefits likely to be paid to present active members who become totally and permanently disabled	1,046,903	1,072,447	(25,544)
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	4,918,247	2,825,390	2,092,857
Refunds likely to be paid to present active members	89,056	80,365	8,691
Active member totals	$224,173,843	$65,803,805	158,370,038
Retired lives			316,042,514
Terminated-vested members			8,083,054
Members on LTD			473,705
Total actuarial accrued liability			482,969,311
Actuarial value of assets			134,349,908
Unfunded actuarial accrued liability			$348,619,403
Funded ratio			27.8%

Statistical Section

★ ★ ★ ★ ★

The people at MOSERS are talented, professional, and easy to work with. It was energizing to work with employees that have a passion for excellence. The status quo is not good enough at MOSERS. They always strive to do things better. We made mistakes, but we learned from them and moved on.

— Randy Woods, IT Coordinator
Years of Service: 1987 - 2014

Statistical Section

Summary

Plan Membership

Membership in the pension trusts administered by MOSERS increased by 1,713. Active members decreased by 641, retired members and their beneficiaries increased by 1,992, and terminated-vested members increased by 362. Membership data for the last ten years ended June 30, 2015, can be found on page 134. The location of benefit recipients, showing that the majority remain in the state of Missouri after retirement, is depicted on page 135.

Valuation Assets vs Pension Liabilities

The charts on 130-132 graphically represent the funding progress of the pension plans for the 10 years ended June 30, 2015. The bar charts in the middle of the pages show the portion of the pension liabilities that are unfunded compared to the portion covered by assets in the trust funds. The bar charts on the bottom of the pages illustrate the funded ratio of the plans for the ten years ended June 30, 2015.

The existence of the unfunded actuarial accrued liabilities is not necessarily an indication of financial problems, but the fluctuations are important and must be monitored and controlled.

The remainder of this section contains various statistical and historical data considered useful in evaluating the condition of the plans.

All nonaccounting data is taken from MOSERS' internal sources except for that information which is derived from the actuarial valuations (pages 130-134, 138, and 148-149). Member data may differ between some schedules since the valuations are performed using data as of May 31 each year.

★ ★ ★ ★ ★

MOSERS always strives for excellence. As a former long-term employee of the system, I have had the privilege of working with many who shared this common goal. I have since retired and can confidently say that I know MOSERS will continue to do great things for current and future retirees.

— Sally Hager, Retired Records and Facility Supervisor

Years of Service: 1986 - 2013

Changes in Net Position | Last Ten Fiscal Years

	2006	2007	2008	2009
MSEP Plan				
Additions				
Employer contributions	$227,233,195	$ 239,488,751	$ 249,770,156	$ 252,105,008
Employee contributions	0	0	0	0
Member service purchases	3,072,315	3,460,923	3,085,133	3,235,999
Service transfers in	161,613	172,936	38,069	28,075
Investment income (net of expenses)	728,526,971	1,283,573,438	110,627,355	(1,508,376,715)
Other	501,512	542,266	572,274	619,060
Total additions to plan net position	959,495,606	1,527,238,314	364,092,987	(1,252,388,573)
Deductions				
Benefits	400,169,563	447,240,771	479,853,891	511,466,555
Refunds	1,341	0	0	0
Service transfers out	133,866	51,980	251,443	0
Administrative expenses	6,486,597	6,689,710	6,950,878	7,088,483
Total deductions from plan net position	406,791,367	453,982,461	487,056,212	518,555,038
Change in net position	$552,704,239	$1,073,255,853	$(122,963,225)	$(1,770,943,611)
Judicial Plan				
Additions				
Employer contributions	$ 22,401,569	$ 23,745,467	$ 26,215,309	$ 27,725,882
Employee contributions	0	0	0	0
Investment income (net of expenses)	5,933,531	11,356,312	1,043,940	(15,847,382)
Other	4,085	4,798	5,506	6,504
Total additions to plan net position	28,339,185	35,106,577	27,264,755	11,885,004
Deductions				
Benefits	19,091,587	20,595,504	22,058,085	23,232,088
Administrative expenses	52,830	59,187	66,880	74,473
Total deductions from plan net position	19,144,417	20,654,691	22,124,965	23,306,561
Change in net position	$ 9,194,768	$ 14,451,886	$ 5,139,790	$ (11,421,557)
Internal Service Fund				
Operating revenues				
Premium receipts	$ 26,415,236	$ 27,101,931	$ 27,957,666	$ 28,990,057
Deferred compensation receipts	0	0	60,393,973	75,661,047
Miscellaneous income	436,501	436,502	536,493	1,027,380
Total operating revenues	26,851,737	27,538,433	88,888,132	105,678,484
Operating expenses				
Premium disbursements	26,379,919	27,063,815	27,927,265	28,968,981
Deferred compensation disbursements	0	0	60,371,802	75,683,218
Premium refunds	35,317	38,116	30,401	21,076
Administrative expenses	487,699	527,040	708,100	819,581
Total operating expenses	26,902,935	27,628,971	89,037,568	105,492,856
Non-operating revenues				
Investment income	85,124	117,729	77,396	20,755
Change in net position	$ 33,926	$ 27,191	$ (72,040)	$ 206,383

2010	2011	2012	2013	2014	2015
$ 251,226,187	$ 263,418,048	$ 263,373,924	$ 274,655,284	$ 326,370,336	$ 329,752,832
0	599,761	4,955,399	9,698,883	14,025,328	18,099,455
3,576,954	2,814,551	2,869,085	3,475,123	2,909,423	1,859,005
10,009	142,248	2,675,339	2,446,627	2,252,206	3,575,815
859,898,512	1,395,677,299	158,102,123	778,008,348	1,484,709,539	(237,603,530)
639,901	659,474	448,463	489,193	450,453	533,001
1,115,351,563	1,663,311,381	432,424,333	1,068,773,458	1,830,717,285	116,216,578
543,284,289	597,424,954	611,522,451	646,708,308	677,097,411	723,994,041
3,106	0	123,709	622,341	1,421,856	2,479,264
462,970	17,745,828	588,180	1,911,665	1,916,840	1,792,495
7,064,544	7,054,581	7,017,057	7,575,883	7,336,922	8,077,692
550,814,909	622,225,363	619,251,397	656,818,197	687,773,029	736,343,492
$ 564,536,654	$1,041,086,018	$(186,827,064)	$ 411,955,261	$1,142,944,256	$(620,126,914)
$ 27,029,198	$ 27,702,682	$ 26,324,526	$ 28,330,649	$ 29,264,877	$ 32,696,686
0	59,958	149,859	211,936	294,810	488,193
9,909,718	17,460,050	2,061,916	10,724,252	21,388,261	(3,618,469)
7,374	8,250	5,849	6,743	6,489	8,117
36,946,290	45,230,940	28,542,150	39,273,580	50,954,437	29,574,527
24,230,545	25,488,531	26,821,412	27,802,871	29,406,625	31,245,906
81,414	88,253	91,514	104,428	105,693	123,015
24,311,959	25,576,784	26,912,926	27,907,299	29,512,318	31,368,921
$ 12,634,331	$ 19,654,156	$ 1,629,224	$ 11,366,281	$ 21,442,119	$ (1,794,394)
$ 29,098,799	$ 28,829,638	$ 28,578,326	$ 28,961,637	$ 29,563,054	$ 30,177,918
69,143,267	54,221,226	17,500,476	0	1,000,000	0
1,039,369	981,404	608,187	480,120	480,120	480,120
99,281,435	84,032,268	46,686,989	29,441,757	31,043,174	30,658,038
29,077,825	28,804,638	28,556,036	28,930,950	29,544,110	30,157,271
69,143,267	54,221,226	17,500,476	0	0	0
20,974	24,999	22,291	30,687	18,942	20,646
797,020	826,809	778,529	805,457	755,945	960,827
99,039,086	83,877,672	46,857,332	29,767,094	30,319,997	31,138,744
9,816	11,071	11,068	12,075	11,886	12,549
$ 252,165	$ 165,667	$ (159,275)	$ (313,262)	$ 736,063	$ (468,157)

Deductions from Net Position for Benefits and Refunds by Type | Last Ten Fiscal Years

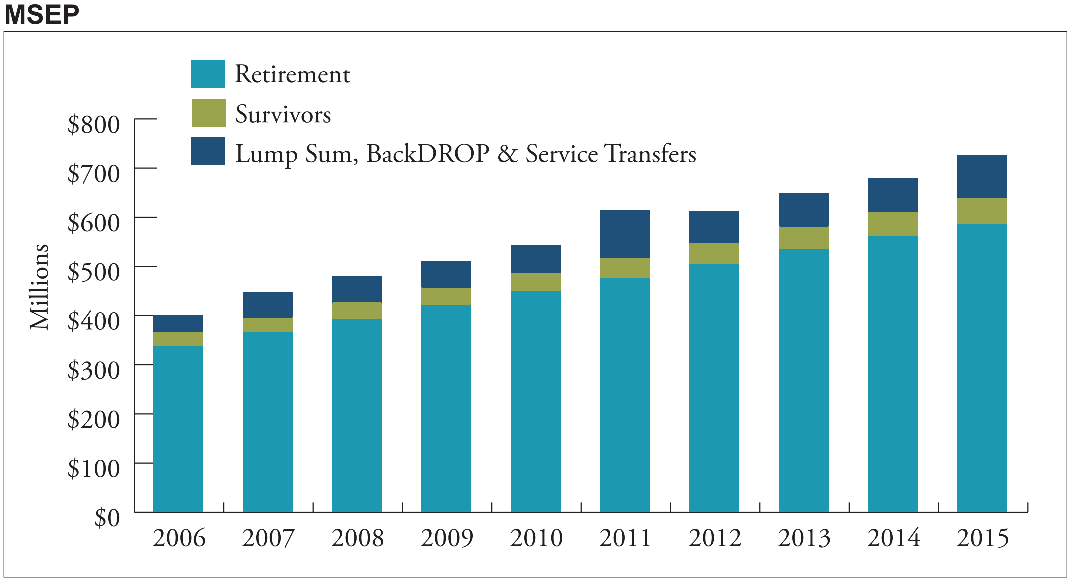
MSEP

Type of benefit	FY06	FY07	FY08	FY09
Retirement	$338,449,307	$366,185,990	$393,328,057	$421,847,017
Survivors	26,944,984	29,340,464	31,894,702	34,615,979
Disability	62,324	42,273	36,825	33,812
Lump sum	459,398	556,568	454,643	272,189
BackDROP and service transfers	34,253,550	51,115,476	54,139,664	54,697,557
Total benefits	$400,169,563	$447,240,771	$479,853,891	$511,466,554
Refunds	$ 1,341	$ 0	$ 0	$ 0

Judicial Plan

Type of benefit	FY06	FY07	FY08	FY09
Retirement	$15,989,341	$17,135,426	$18,342,676	$19,143,753
Survivors	3,070,746	3,433,078	3,715,409	4,088,335
Disability	31,500	27,000	0	0
Total benefits	$19,091,587	$20,595,504	$22,058,085	$23,232,088

MSEP



Disability benefits are included, but amounts are too minimal to display visually in graph.

FY10	FY11	FY12	FY13	FY14	FY15
$448,880,110	$476,841,741	$504,555,055	$533,962,630	$560,553,490	$586,597,187
37,718,898	39,968,601	42,963,959	46,659,381	49,922,170	52,940,062
33,403	29,191	29,503	27,255	22,468	16,857
409,787	293,147	229,650	191,320	286,184	57,525
56,705,060	98,038,103	64,332,464	67,779,388	68,229,937	86,174,905
$543,747,258	$615,170,783	$612,110,631	$648,619,974	$679,014,249	$725,786,536
$ 3,106	$ 0	$ 123,709	$ 622,341	$ 1,421,856	$ 2,479,264

FY10	FY11	FY12	FY13	FY14	FY15
$19,784,720	$21,025,904	$22,284,844	$23,123,707	$24,609,421	$26,181,505
4,445,825	4,462,627	4,536,569	4,679,169	4,797,204	5,064,400
0	0	0	0	0	0
$24,230,545	$25,488,531	$26,821,413	$27,802,876	$29,406,625	$31,245,905

Judicial Plan

Disability benefits are included, but amounts are too minimal to display visually in graph.

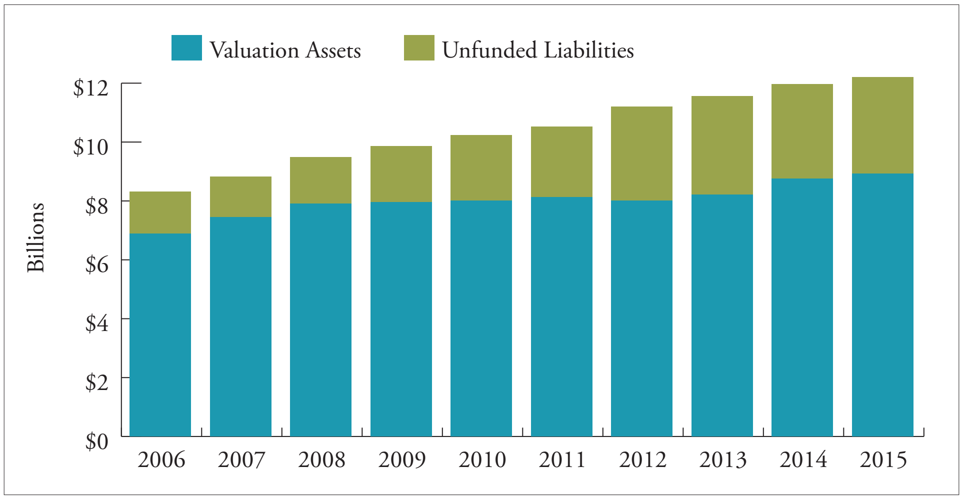
Pension Trust Funds

Valuation Assets (Smoothed Market) vs. Pension Liabilities | Ten Years Ended June 30, 2015

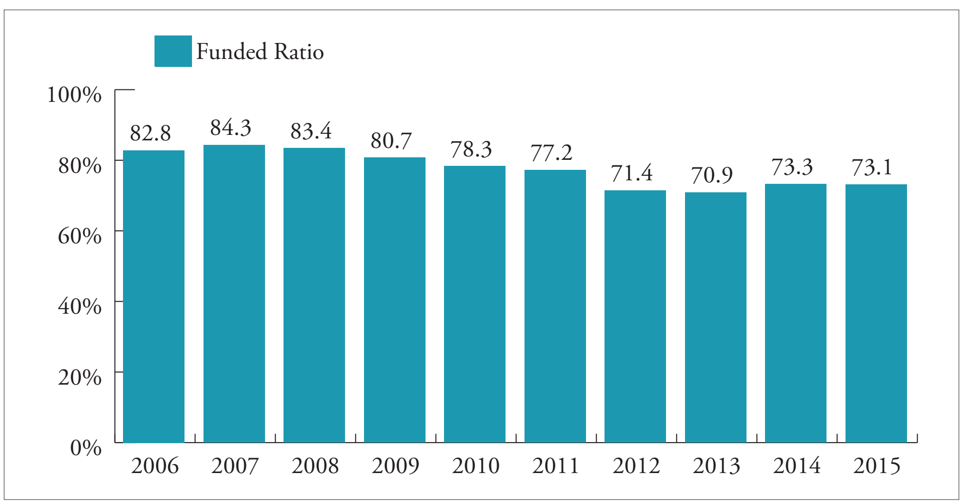
All Plans Combined

	Dollars in Billions			
Fiscal Year	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	Funded Ratios
2006	$6.8883	$1.4339	$ 8.3222	82.8%
2007	7.4392	1.3879	8.8271	84.3
2008	7.9117	1.5714	9.4831	83.4
2009	7.9574	1.9065	9.8639	80.7
2010	8.0123	2.2228	10.2352	78.3
2011	8.1210	2.3960	10.5170	77.2
2012	7.9994	3.2076	11.2070	71.4
2013	8.2075	3.3624	11.5700	70.9
2014	8.7621	3.1949	11.9569	73.3
2015	8.9268	3.2838	12.2106	73.1

Actuarial Accrued Liabilities | All Plans Combined



Valuation Assets as Percents of Pension Liabilities | All Plans Combined



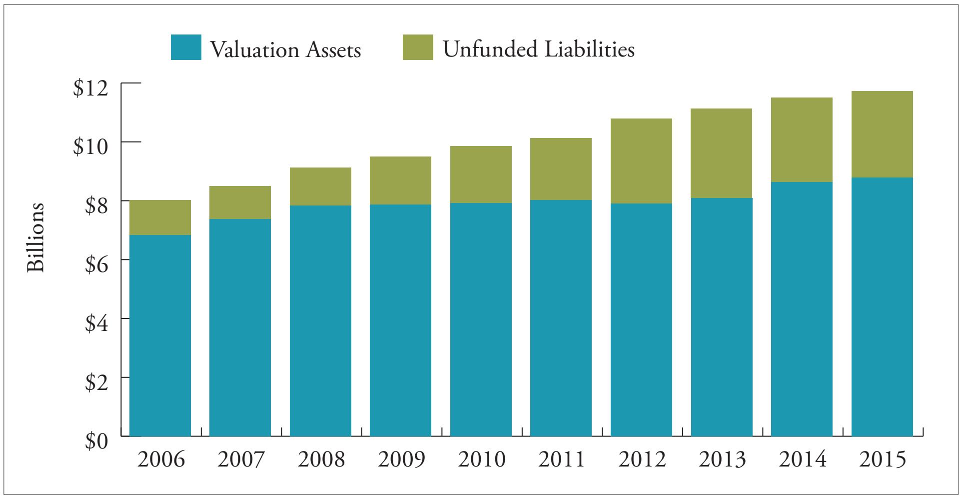
Pension Trust Funds

Valuation Assets (Smoothed Market) vs. Pension Liabilities | Ten Years Ended June 30, 2015

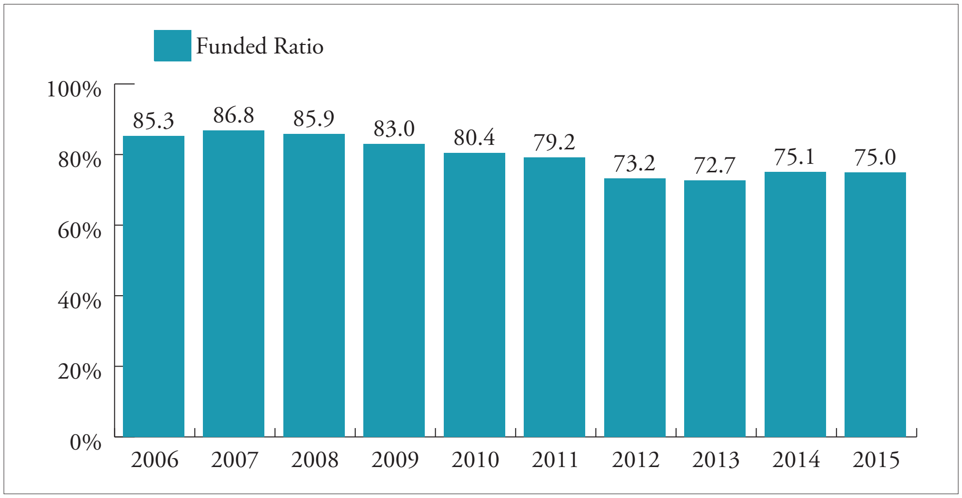
MSEP

	Dollars in Billions			
Fiscal Year	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	Funded Ratios
2006	$6.8366	$1.1766	$ 8.0132	85.3%
2007	7.3773	1.1231	8.5004	86.8
2008	7.8385	1.2898	9.1283	85.9
2009	7.8761	1.6187	9.4948	83.0
2010	7.9234	1.9300	9.8532	80.4
2011	8.0225	2.1010	10.1240	79.2
2012	7.8972	2.8965	10.7937	73.2
2013	8.0964	3.0382	11.1346	72.7
2014	8.6378	2.8568	11.4946	75.1
2015	8.7925	2.9351	11.7276	75.0

Actuarial Accrued Liabilities | MSEP



Valuation Assets as Percents of Pension Liabilities | MSEP



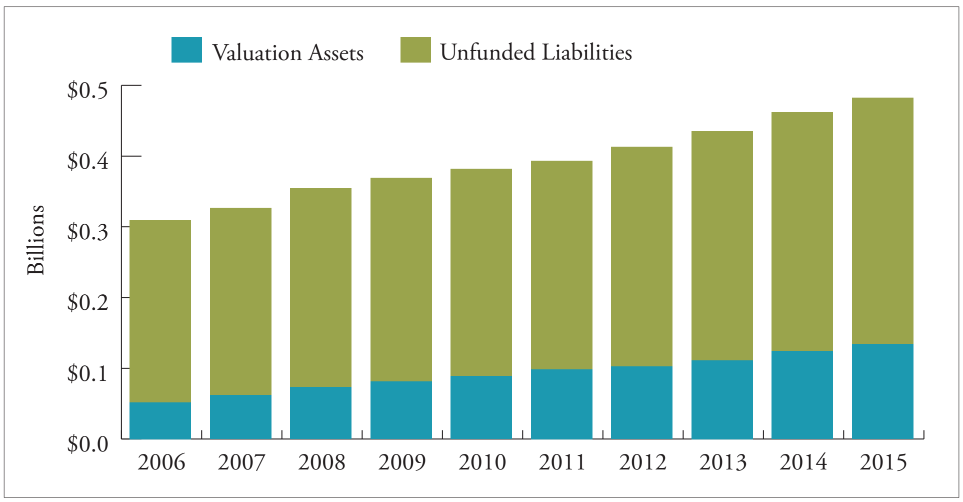
Pension Trust Funds

Valuation Assets (Smoothed Market) vs. Pension Liabilities | Ten Years Ended June 30, 2015

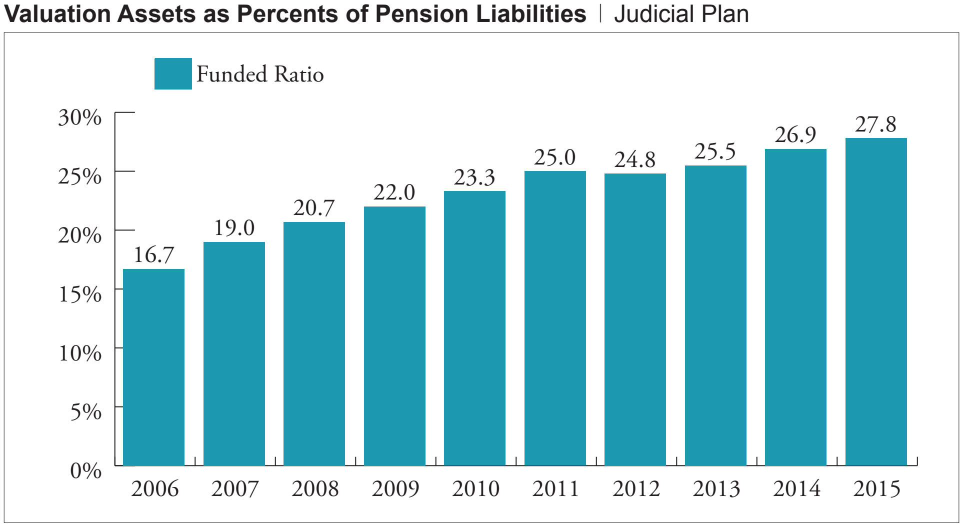
Judicial Plan

	Dollars in Billions			
Fiscal Year	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	Funded Ratios
2006	$0.0517	$0.2573	$0.3090	16.7%
2007	0.0619	0.2648	0.3267	19.0
2008	0.0732	0.2816	0.3548	20.7
2009	0.0813	0.2878	0.3691	22.0
2010	0.0890	0.2930	0.3820	23.3
2011	0.0984	0.2951	0.3935	25.0
2012	0.1023	0.3111	0.4133	24.8
2013	0.1111	0.3242	0.4354	25.5
2014	0.1243	0.3381	0.4623	26.9
2015	0.1343	0.3486	0.4830	27.8

Actuarial Accrued Liabilities | Judicial Plan



Valuation Assets as Percents of Pension Liabilities | Judicial Plan

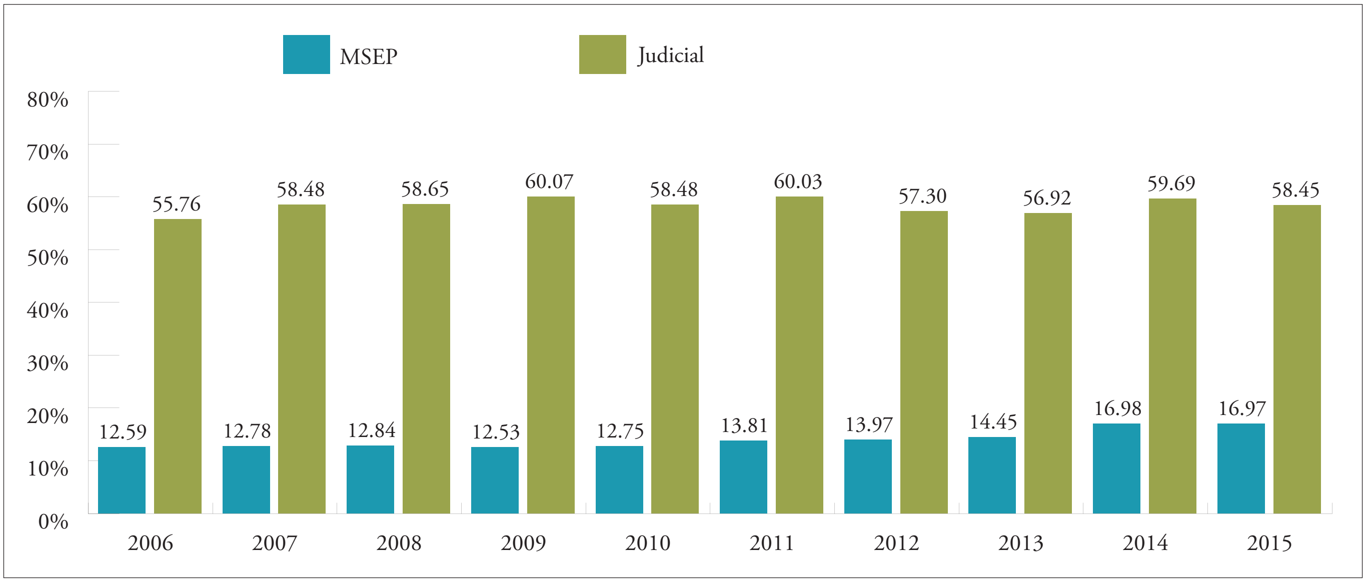


Contribution Rates as a Percent of Payroll | Last Ten Fiscal Years

Fiscal Year	MSEP	Judicial Plan
2006*	12.59%	55.76%
2007	12.78	58.48
2008	12.84	58.65
2009	12.53	60.07
2010	12.75	58.48
2011	13.81	60.03
2012	13.97	57.30
2013	14.45	56.92
2014	16.98	59.69
2015	16.97	58.45

** Contribution rates for 2006 for the Administrative Law Judges and Legal Advisors Plan (ALJLAP) was 21.79%. The ALJLAP was transitioned to MSEP during fiscal year 2005. After fiscal year 2006, the rate for MSEP includes the ALJLAP.*

Contribution Rates

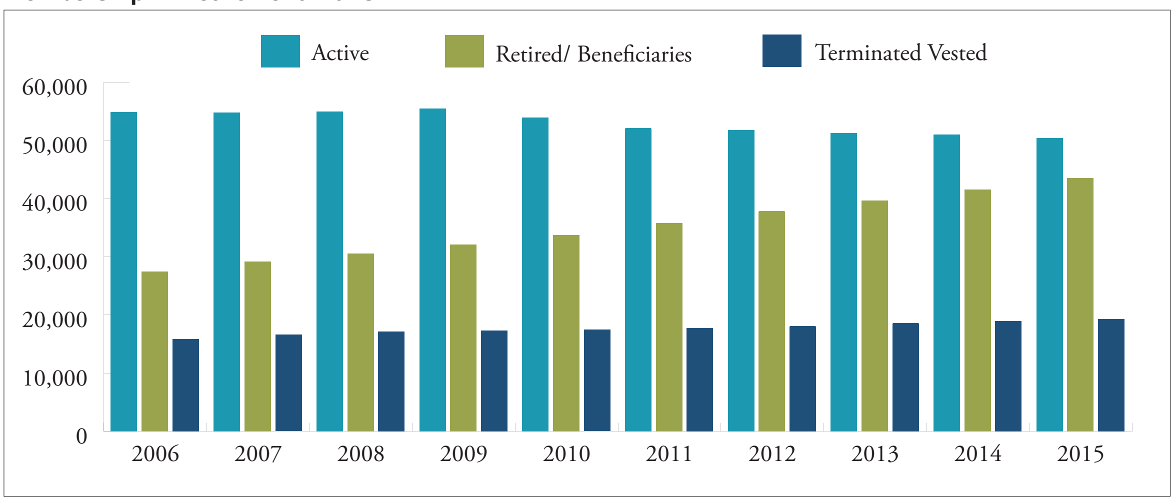


Membership in Retirement Plans | Last Ten Fiscal Years

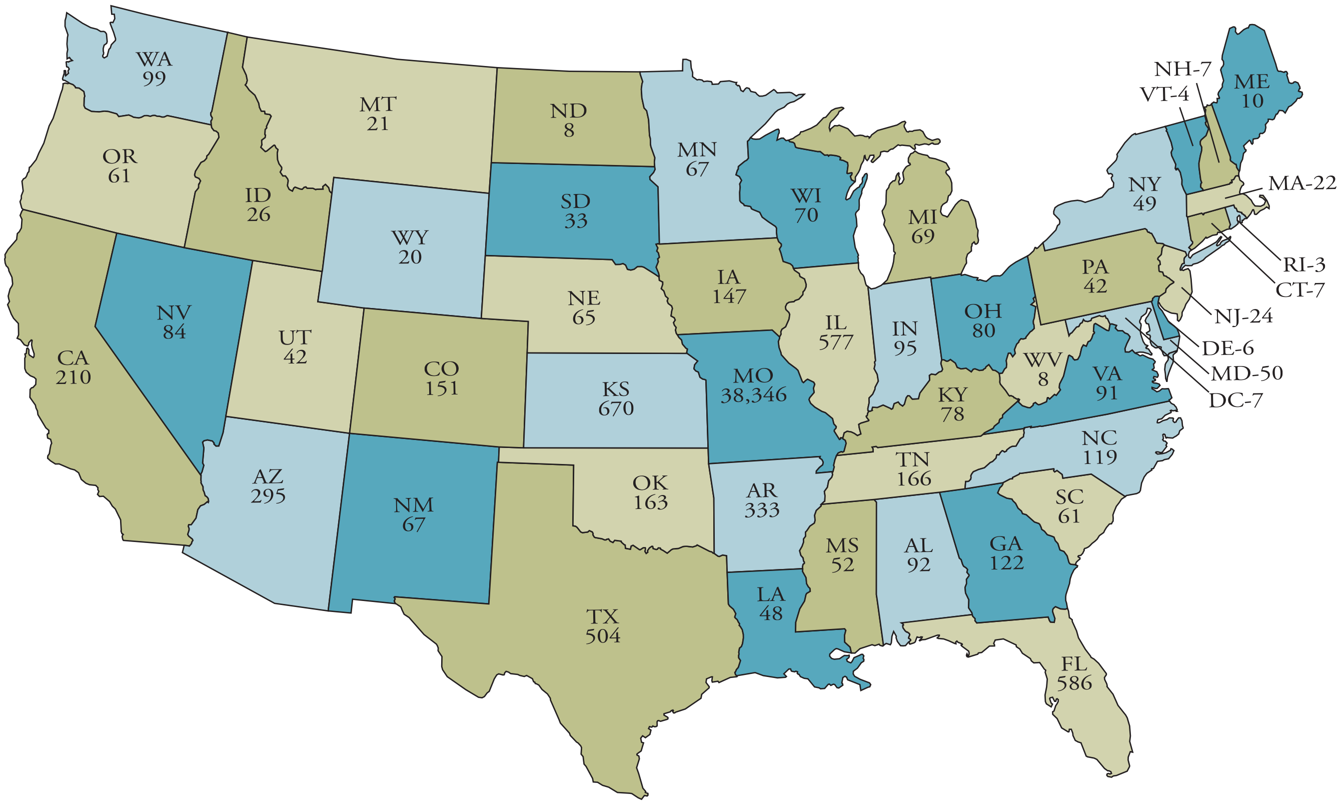
Fiscal Year	Active*	Retired/Beneficiaries	Terminated-Vested	Totals
2006	54,887	27,450	15,829	98,166
2007	54,763	29,129	16,578	100,470
2008	54,943	30,572	17,123	102,638
2009	55,454	32,100	17,304	104,858
2010	53,880	33,716	17,441	105,037
2011	52,059	35,801	17,757	105,617
2012	51,730	37,796	18,075	107,601
2013	51,233	39,636	18,581	109,450
2014	51,026	41,511	18,957	111,494
2015	50,385	43,503	19,319	113,207

** Excludes members on leave of absence and long-term disability.*

Membership in Retirement Plans



Distribution of Benefit Recipients by Location | June 30, 2015



Benefit Recipients Outside the Continental United States

14	Alaska	1	Germany	1	Philippines
9	Hawaii	1	Guam	1	Puerto Rico
6	Army Post Office	2	India	1	Sri Lanka
1	Argentina	2	Ireland	1	Sweden
2	Australia	2	Israel	1	Thailand
13	Canada	2	Italy	1	The Netherlands
1	Colombia, South America	1	Mexico	2	United Arab Emirates
1	Costa Rica	1	Marshall Islands	3	United Kingdom
1	Czech Republic	1	P. R. China	2	Virgin Islands
1	Equador	1	Panama		

Benefit Recipients by Type of Retirement and Option Selected | June 30, 2015

MSEP

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Retirement A	B	C	D	E	F	G
1-250	5,167	1,898	2,404	263	529	1	0	72
251-500	7,417	3,577	2,640	403	711	3	0	83
501-750	5,358	3,159	1,274	313	570	0	0	42
751-1000	4,762	3,572	581	196	385	0	0	28
1001-1250	4,011	3,379	249	116	255	0	0	12
1251-1500	3,357	2,952	122	89	187	0	0	7
1501-1750	2,771	2,492	65	71	141	0	0	2
1751-2000	2,289	2,127	41	33	85	0	0	3
Over 2000	8,353	7,790	59	139	362	0	0	3
Total	43,485	30,946	7,435	1,623	3,225	4	0	252

Judicial Plan

Amount of Monthly Benefit	Number of Benefit Recipients	Type of Retirement A	B	C	D	E	F	G
1-250	3	0	1	0	2	0	0	0
251-500	8	0	6	0	1	0	0	1
501-750	6	0	3	0	3	0	0	0
751-1000	8	1	2	1	3	0	0	1
1001-1250	3	0	2	0	1	0	0	0
1251-1500	7	1	4	1	0	0	0	1
1501-1750	5	0	4	0	1	0	0	0
1751-2000	8	0	2	3	2	0	0	1
Over 2000	500	313	52	30	102	0	0	3
Total	548	315	76	35	115	0	0	7

Type of Retirement
A - Normal retirement
B - Early retirement
C - Survivor of active
D - Survivor of retired
E - Disability
F - Occupational disability (Water Patrol)
G - Ex-spouse

Option Selected									
1	2	3	4	5	6	7	8	9	10
0	18	227	195	297	0	1,082	486	40	2,822
8	42	242	195	415	3	1,531	954	26	4,001
8	35	135	79	268	1	1,144	1,129	5	2,554
6	25	69	49	328	1	1,082	1,057	3	2,142
11	15	54	37	389	0	877	763	3	1,862
7	13	53	30	395	1	762	554	0	1,542
8	7	44	29	396	0	572	376	0	1,339
9	3	27	19	369	1	481	268	0	1,112
71	17	89	36	1,161	0	2,289	1,131	0	3,559
128	175	940	669	4,018	7	9,820	6,718	77	20,933

Option Selected									
1	2	3	4	5	6	7	8	9	10
3	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	1
5	0	0	0	1	0	0	0	0	0
4	0	0	0	1	0	1	0	0	2
3	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	1
5	0	0	0	0	0	0	0	0	0
4	0	0	0	1	0	0	0	0	3
464	0	0	0	24	0	0	0	1	11
501	0	0	0	27	0	1	0	1	18

Option Selected

1 - Automatic 50% joint & survivor
2 - 60 guaranteed payments
3 - 120 guaranteed payments
4 - 180 guaranteed payments
5 - 50% joint & survivor
6 - 75% joint & survivor
7 - 100% joint & survivor
8 - Unreduced 50% joint & survivor
9 - Automatic minor survivor
10 - No survivor option (includes pop-ups)

Benefits Payable Tabulated by Type of Benefit and by Option | June 30, 2015

MSEP

Type of Benefit	Number	Annual Benefits	Average Annual Benefits
Service retirement			
Life annuity	5,382	$ 73,481,806	$13,653
50% joint and survivor	5,469	95,800,158	17,517
100% joint and survivor	2,869	58,351,728	20,339
5-year certain and life	142	1,494,782	10,527
10-year certain and life	157	1,721,323	10,964
Survivor beneficiary	2,425	30,002,325	12,372
Total	16,444	260,852,122	15,863
Disability retirement	4	14,520	3,630
Death-in-service	1,451	16,301,756	11,235
Grand totals	17,899	$277,168,398	15,485

MSEP 2000

Type of Benefit	Number	Annual Benefits	Average Annual Benefits
Service retirement			
Life annuity	15,080	$213,850,818	$14,181
50% joint and survivor	3,663	72,852,761	19,889
100% joint and survivor	4,114	66,836,478	16,246
5-year certain and life	28	392,580	14,021
10-year certain and life	681	7,130,261	10,470
15-year certain and life	545	4,597,566	8,436
Survivor beneficiary	788	7,376,718	9,361
Total	24,899	373,037,182	14,982
Death-in-service	165	644,634	3,907
Grand totals	25,064	$373,681,816	14,909

Judicial Plan

Type of Benefit	Number	Annual Benefits	Average Annual Benefits
Service retirement			
Life annuity	5	$ 316,380	$63,276
50% joint and survivor	386	26,845,913	69,549
Survivor beneficiary	113	4,098,361	36,269
Total	504	31,260,654	62,025
Death-in-service	35	1,159,940	33,141
Grand totals	539	$ 32,420,594	60,150

Average Monthly Benefit Amounts | Ten Years Ended June 30, 2015

MSEP

Members Retiring During Fiscal Year		Years Credited Service by Category <5	5-10	11-15	16-20	21-25	26-30	31+	All Members
	Average monthly benefit	$ 592	$ 290	$ 433	$ 697	$ 1,038	$ 1,563	$ 1,849	$ 915
2006	Average final average salary	$ 4,599	$ 2,480	$ 2,323	$ 2,683	$ 2,747	$ 3,312	$ 3,424	$ 2,797
	Number of retirees	4	326	265	265	272	335	149	1,616
	Average monthly benefit	$ 150	$ 277	$ 492	$ 689	$ 1,133	$ 1,576	$ 1,863	$ 962
2007	Average final average salary	$ 2,613	$ 2,359	$ 2,578	$ 2,628	$ 2,992	$ 3,331	$ 3,440	$ 2,862
	Number of retirees	1	395	295	300	315	422	198	1,926
	Average monthly benefit	$ 0	$ 264	$ 477	$ 730	$ 1,111	$ 1,597	$ 2,045	$ 949
2008	Average final average salary	$ 0	$ 2,361	$ 2,461	$ 2,801	$ 2,961	$ 3,386	$ 3,687	$ 2,875
	Number of retirees	0	370	368	304	329	365	186	1,922
	Average monthly benefit	$ 0	$ 292	$ 492	$ 750	$ 1,260	$ 1,649	$ 2,152	$ 987
2009	Average final average salary	$ 0	$ 2,413	$ 2,466	$ 2,864	$ 3,286	$ 3,487	$ 3,904	$ 2,979
	Number of retirees	1	429	354	298	385	368	169	2,004
	Average monthly benefit	$ 569	$ 288	$ 509	$ 782	$ 1,197	$ 1,604	$ 2,120	$ 953
2010	Average final average salary	$ 6,867	$ 2,530	$ 2,595	$ 2,898	$ 3,198	$ 3,490	$ 3,826	$ 3,000
	Number of retirees	3	457	412	328	358	326	210	2,094
	Average monthly benefit	$ 39	$ 333	$ 505	$ 823	$ 1,226	$ 1,654	$ 2,127	$ 1,015
2011	Average final average salary	$ 925	$ 2,621	$ 2,524	$ 3,043	$ 3,238	$ 3,525	$ 3,863	$ 3,065
	Number of retirees	3	563	469	417	467	479	272	2,670
	Average monthly benefit	$ 139	$ 305	$ 522	$ 829	$ 1,237	$ 1,639	$ 2,269	$ 947
2012	Average final average salary	$ 8,932	$ 2,569	$ 2,660	$ 3,067	$ 3,296	$ 3,521	$ 4,094	$ 3,065
	Number of retirees	4	571	511	394	448	363	191	2,482
	Average monthly benefit	$ 251	$ 325	$ 523	$ 754	$ 1,245	$ 1,699	$ 2,010	$ 929
2013	Average final average salary	$ 3,744	$ 2,670	$ 2,590	$ 2,814	$ 3,317	$ 3,637	$ 3,674	$ 3,012
	Number of retirees	5	588	541	373	429	380	200	2,516
	Average monthly benefit	$ 280	$ 310	$ 517	$ 808	$ 1,200	$ 1,692	$ 2,207	$ 941
2014	Average final average salary	$ 4,426	$ 2,679	$ 2,605	$ 3,027	$ 3,232	$ 3,652	$ 3,999	$ 3,069
	Number of retirees	5	625	497	368	436	391	199	2,521
	Average monthly benefit	$ 219	$ 315	$ 522	$ 801	$ 1,268	$ 1,723	$ 2,217	$ 998
2015	Average final average salary	$ 5,058	$ 2,596	$ 2,624	$ 2,954	$ 3,416	$ 3,729	$ 4,016	$ 3,119
	Number of retirees	6	644	519	437	450	487	250	2,793
Ten Years Ended June 30, 2015									
	Average monthly benefit	$ 277	$ 303	$ 504	$ 773	$ 1,202	$ 1,643	$ 2,095	$ 962
	Average final average salary	$ 4,729	$ 2,549	$ 2,558	$ 2,895	$ 3,197	$ 3,515	$ 3,808	$ 3,000
	Number of retirees	32	4,968	4,231	3,484	3,889	3,916	2,024	22,544

Note: COLA increases and temporary benefits payable under MSEP 2000 until age 62 are excluded from the above for comparison purposes.

Average Monthly Benefit Amounts | Ten Years Ended June 30, 2015

General Employees in the MSEP*

Members Retiring During Fiscal Year		Years Credited Service by Category <5	5-10	11-15	16-20	21-25	26-30	31+	All Members
2006	Average monthly benefit	$ 426	$ 277	$ 421	$ 697	$ 1,038	$ 1,559	$ 1,841	$ 910
	Average final average salary	$ 3,520	$ 2,446	$ 2,315	$ 2,683	$ 2,747	$ 3,308	$ 3,415	$ 2,785
	Number of retirees	3	322	262	265	272	334	148	1,606
2007	Average monthly benefit	$ 0	$ 260	$ 486	$ 685	$ 1,133	$ 1,571	$ 1,863	$ 960
	Average final average salary	$ 0	$ 2,341	$ 2,575	$ 2,627	$ 2,992	$ 3,332	$ 3,440	$ 2,861
	Number of retirees	0	384	293	299	315	421	198	1,910
2008	Average monthly benefit	$ 0	$ 259	$ 463	$ 720	$ 1,111	$ 1,597	$ 2,045	$ 946
	Average final average salary	$ 0	$ 2,356	$ 2,449	$ 2,784	$ 2,961	$ 3,386	$ 3,687	$ 2,871
	Number of retirees	0	367	363	303	329	365	186	1,913
2009	Average monthly benefit	$ 111	$ 265	$ 471	$ 746	$ 1,242	$ 1,649	$ 2,134	$ 977
	Average final average salary	$ 1,596	$ 2,379	$ 2,441	$ 2,864	$ 3,260	$ 3,487	$ 3,880	$ 2,965
	Number of retirees	1	415	350	297	382	368	168	1,981
2010	Average monthly benefit	$ 442	$ 284	$ 495	$ 778	$ 1,197	$ 1,599	$ 2,093	$ 946
	Average final average salary	$ 6,215	$ 2,527	$ 2,578	$ 2,898	$ 3,198	$ 3,492	$ 3,794	$ 2,991
	Number of retirees	2	454	409	327	358	325	208	2,083
2011	Average monthly benefit	$ 39	$ 301	$ 484	$ 806	$ 1,223	$ 1,645	$ 2,109	$ 1,005
	Average final average salary	$ 925	$ 2,603	$ 2,502	$ 3,031	$ 3,239	$ 3,520	$ 3,840	$ 3,057
	Number of retirees	3	537	462	413	466	476	270	2,627
2012	Average monthly benefit	$ 139	$ 292	$ 505	$ 816	$ 1,237	$ 1,632	$ 2,269	$ 940
	Average final average salary	$ 8,932	$ 2,553	$ 2,637	$ 3,053	$ 3,296	$ 3,508	$ 4,094	$ 3,054
	Number of retirees	4	563	507	391	448	362	191	2,466
2013	Average monthly benefit	$ 169	$ 302	$ 502	$ 747	$ 1,238	$ 1,699	$ 1,998	$ 923
	Average final average salary	$ 4,244	$ 2,659	$ 2,569	$ 2,813	$ 3,305	$ 3,637	$ 3,648	$ 3,005
	Number of retirees	3	564	534	371	428	380	199	2,479
2014	Average monthly benefit	$ 262	$ 299	$ 511	$ 802	$ 1,196	$ 1,692	$ 2,207	$ 939
	Average final average salary	$ 5,382	$ 2,667	$ 2,603	$ 3,027	$ 3,233	$ 3,652	$ 3,999	$ 3,068
	Number of retirees	3	618	493	366	435	391	199	2,505
2015	Average monthly benefit	$ 219	$ 301	$ 517	$ 786	$ 1,268	$ 1,723	$ 2,208	$ 994
	Average final average salary	$ 5,058	$ 2,581	$ 2,623	$ 2,947	$ 3,416	$ 3,729	$ 4,007	$ 3,116
	Number of retirees	6	633	517	433	450	487	249	2,775
Ten Years Ended June 30, 2015									
	Average monthly benefit	$ 222	$ 287	$ 490	$ 764	$ 1,198	$ 1,640	$ 2,086	$ 956
	Average final average salary	$ 4,893	$ 2,533	$ 2,545	$ 2,889	$ 3,193	$ 3,513	$ 3,795	$ 2,993
	Number of retirees	25	4,857	4,190	3,465	3,883	3,909	2,016	22,345

** Excludes legislators, administrave law judges, water patrol, and elected officials.*
Note: COLA increases and temporary benefits payable under MSEP 2000 until age 62 are excluded from the above for comparison purposes.

Average Monthly Benefit Amounts | Ten Years Ended June 30, 2015

Legislators in the MSEP

Members Retiring During Fiscal Year		Years Credited Service by Category <5	5-10	11-15	16-20	21-25	26-30	31+	All Members
	Average monthly benefit	$ 0	$ 871	$ 1,524	$ 0	$ 0	$ 0	$ 0	$ 1,263
2006	Average final average salary	$ 0	$ 2,993	$ 2,993	$ 0	$ 0	$ 0	$ 0	$ 2,993
	Number of retirees	0	2	3	0	0	0	0	5
	Average monthly benefit	$ 150	$ 873	$ 1,306	$ 1,959	$ 0	$ 3,484	$ 0	$ 1,113
2007	Average final average salary	$ 2,613	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 2,993	$ 0	$ 2,969
	Number of retirees	1	11	2	1	0	1	0	16
	Average monthly benefit	$ 0	$ 871	$ 1,306	$ 0	$ 0	$ 0	$ 0	$ 1,045
2008	Average final average salary	$ 0	$ 2,993	$ 2,993	$ 0	$ 0	$ 0	$ 0	$ 2,993
	Number of retirees	0	3	2	0	0	0	0	5
	Average monthly benefit	$ 0	$ 910	$ 1,496	$ 1,995	$ 2,395	$ 0	$ 0	$ 1,150
2009	Average final average salary	$ 0	$ 2,993	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 0	$ 2,993
	Number of retirees	0	13	3	1	1	0	0	18
	Average monthly benefit	$ 0	$ 876	$ 1,496	$ 2,245	$ 0	$ 3,242	$ 0	$ 1,602
2010	Average final average salary	$ 0	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 2,993	$ 0	$ 2,993
	Number of retirees	0	3	1	1	0	1	0	6
	Average monthly benefit	$ 0	$ 991	$ 1,512	$ 2,030	$ 2,744	$ 3,242	$ 0	$ 1,254
2011	Average final average salary	$ 0	$ 2,993	$ 2,993	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 2,993
	Number of retirees	0	26	4	3	1	1	0	35
	Average monthly benefit	$ 0	$ 1,069	$ 1,621	$ 2,225	$ 0	$ 0	$ 0	$ 1,295
2012	Average final average salary	$ 0	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 0	$ 0	$ 2,993
	Number of retirees	0	7	2	1	0	0	0	10
	Average monthly benefit	$ 374	$ 910	$ 1,513	$ 2,120	$ 0	$ 0	$ 0	$ 1,046
2013	Average final average salary	$ 2,993	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 0	$ 0	$ 2,993
	Number of retirees	2	23	5	2	0	0	0	32
	Average monthly benefit	$ 307	$ 1,044	$ 1,496	$ 1,995	$ 2,744	$ 0	$ 0	$ 1,293
2014	Average final average salary	$ 2,993	$ 2,993	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 0	$ 2,993
	Number of retirees	2	6	3	2	1	0	0	14
	Average monthly benefit	$ 0	$ 977	$ 1,735	$ 2,162	$ 0	$ 0	$ 0	$ 1,315
2015	Average final average salary	$ 0	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 0	$ 0	$ 2,993
	Number of retirees	0	10	2	3	0	0	0	15
Ten Years Ended June 30, 2015									
	Average monthly benefit	$ 302	$ 948	$ 1,503	$ 2,088	$ 2,628	$ 3,323	$ 0	$ 1,204
	Average final average salary	$ 2,917	$ 2,993	$ 2,993	$ 2,993	$ 2,993	$ 2,993	$ 0	$ 2,991
	Number of retirees	5	104	27	14	3	3	0	156

Note: COLA increases and temporary benefits payable under MSEP 2000 until age 62 are excluded from the above for comparison purposes.

Average Monthly Benefit Amounts | Ten Years Ended June 30, 2015

Elected Officials in the MSEP

Members Retiring During Fiscal Year		Years Credited Service by Category <5	5-10	11-15	16-20	21-25	26-30	31+	All Members
	Average monthly benefit	$ 0	$ 2,009	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,009
2006	Average final average salary	$ 0	$ 8,979	$ 0	$ 0	$ 0	$ 0	$ 0	$ 8,979
	Number of retirees	0	1	0	0	0	0	0	1
	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2007	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Number of retirees	0	0	0	0	0	0	0	0
	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2008	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Number of retirees	0	0	0	0	0	0	0	0
	Average monthly benefit	$ 0	$ 3,336	$ 4,852	$ 0	$ 0	$ 0	$ 0	$ 4,094
2009	Average final average salary	$ 0	$ 8,979	$ 9,703	$ 0	$ 0	$ 0	$ 0	$ 9,341
	Number of retirees	0	1	1	0	0	0	0	2
	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2010	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Number of retirees	0	0	0	0	0	0	0	0
	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2011	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Number of retirees	0	0	0	0	0	0	0	0
	Average monthly benefit	$ 0	$ 0	$ 3,781	$ 0	$ 0	$ 0	$ 0	$ 3,781
2012	Average final average salary	$ 0	$ 0	$ 8,093	$ 0	$ 0	$ 0	$ 0	$ 8,093
	Number of retirees	0	0	2	0	0	0	0	2
	Average monthly benefit	$ 0	$ 0	$ 4,489	$ 0	$ 0	$ 0	$ 0	$ 4,489
2013	Average final average salary	$ 0	$ 0	$ 8,979	$ 0	$ 0	$ 0	$ 0	$ 8,979
	Number of retirees	0	0	1	0	0	0	0	1
	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2014	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Number of retirees	0	0	0	0	0	0	0	0
	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2015	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Number of retirees	0	0	0	0	0	0	0	0
Ten Years Ended June 30, 2015									
	Average monthly benefit	$ 0	$ 2,673	$ 4,226	$ 0	$ 0	$ 0	$ 0	$ 3,708
	Average final average salary	$ 0	$ 8,979	$ 8,717	$ 0	$ 0	$ 0	$ 0	$ 8,804
	Number of retirees	0	2	4	0	0	0	0	6

Note: COLA increases are excluded from the above for comparison purposes.

Average Monthly Benefit Amounts | Ten Years Ended June 30, 2015

Uniformed Water Patrol in the MSEP

		Years Credited Service by Category							
Members Retiring During Fiscal Year		**<5**	**5-10**	**11-15**	**16-20**	**21-25**	**26-30**	**31+**	**All Members**
2006	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,848	$ 3,090	$ 2,969
	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 4,657	$ 4,710	$ 4,684
	Number of retirees	0	0	0	0	0	1	1	2
2007	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Number of retirees	0	0	0	0	0	0	0	0
2008	Average monthly benefit	$ 0	$ 0	$ 750	$ 0	$ 0	$ 0	$ 0	$ 750
	Average final average salary	$ 0	$ 0	$ 2,541	$ 0	$ 0	$ 0	$ 0	$ 2,541
	Number of retirees	0	0	1	0	0	0	0	1
2009	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 5,113	$ 5,113
	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 7,902	$ 7,902
	Number of retirees	0	0	0	0	0	0	1	1
2010	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 4,886	$ 4,886
	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 7,184	$ 7,184
	Number of retirees	0	0	0	0	0	0	2	2
2011	Average monthly benefit	$ 0	$ 0	$ 721	$ 0	$ 0	$ 3,086	$ 4,553	$ 3,200
	Average final average salary	$ 0	$ 0	$ 2,964	$ 0	$ 0	$ 5,077	$ 6,912	$ 5,388
	Number of retirees	0	0	1	0	0	2	2	5
2012	Average monthly benefit	$ 0	$ 0	$ 0	$ 959	$ 0	$ 0	$ 0	$ 959
	Average final average salary	$ 0	$ 0	$ 0	$ 2,794	$ 0	$ 0	$ 0	$ 2,794
	Number of retirees	0	0	0	1	0	0	0	1
2013	Average monthly benefit	$ 0	$ 69	$ 0	$ 0	$ 0	$ 0	$ 0	$ 69
	Average final average salary	$ 0	$ 1,291	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,291
	Number of retirees	0	1	0	0	0	0	0	1
2014	Average monthly benefit	$ 0	$ 0	$ 780	$ 0	$ 0	$ 0	$ 0	$ 780
	Average final average salary	$ 0	$ 0	$ 2,507	$ 0	$ 0	$ 0	$ 0	$ 2,507
	Number of retirees	0	0	1	0	0	0	0	1
2015	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 4,539	$ 4,539
	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 6,321	$ 6,321
	Number of retirees	0	0	0	0	0	0	1	1
Ten Years Ended June 30, 2015									
	Average monthly benefit	$ 0	$ 69	$ 750	$ 959	$ 0	$ 3,007	$ 4,517	$ 2,928
	Average final average salary	$ 0	$ 1,291	$ 2,671	$ 2,794	$ 0	$ 4,937	$ 6,732	$ 4,936
	Number of retirees	0	1	3	1	0	3	7	15

Note: COLA increases and temporary benefits payable under MSEP 2000 until age 62 are excluded from the above for comparison purposes.

Average Monthly Benefit Amounts | Ten Years Ended June 30, 2015

Administrative Law Judges and Legal Advisors in the MSEP

Members Retiring During Fiscal Year		Years Credited Service by Category <5	5-10	11-15	16-20	21-25	26-30	31+	All Members
	Average monthly benefit	$ 1,088	$ 1,669	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1,379
2006	Average final average salary	$ 7,836	$ 5,933	$ 0	$ 0	$ 0	$ 0	$ 0	$ 6,885
	Number of retirees	1	1	0	0	0	0	0	2
	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2007	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
	Number of retirees	0	0	0	0	0	0	0	0
	Average monthly benefit	$ 0	$ 0	$ 2,040	$ 3,843	$ 0	$ 0	$ 0	$ 2,641
2008	Average final average salary	$ 0	$ 0	$ 4,081	$ 7,936	$ 0	$ 0	$ 0	$ 5,366
	Number of retirees	0	0	2	1	0	0	0	3
	Average monthly benefit	$ 0	$ 0	$ 0	$ 0	$ 4,200	$ 0	$ 0	$ 4,200
2009	Average final average salary	$ 0	$ 0	$ 0	$ 0	$ 8,400	$ 0	$ 0	$ 8,400
	Number of retirees	0	0	0	0	2	0	0	2
	Average monthly benefit	$ 823	$ 0	$ 2,827	$ 0	$ 0	$ 0	$ 0	$ 2,159
2010	Average final average salary	$ 8,172	$ 0	$ 5,851	$ 0	$ 0	$ 0	$ 0	$ 6,625
	Number of retirees	1	0	2	0	0	0	0	3
	Average monthly benefit	$ 0	$ 0	$ 3,236	$ 4,101	$ 0	$ 0	$ 0	$ 3,524
2011	Average final average salary	$ 0	$ 0	$ 6,433	$ 8,202	$ 0	$ 0	$ 0	$ 7,023
	Number of retirees	0	0	2	1	0	0	0	3
	Average monthly benefit	$ 0	$ 2,493	$ 0	$ 4,378	$ 0	$ 4,204	$ 0	$ 3,692
2012	Average final average salary	$ 0	$ 8,756	$ 0	$ 8,756	$ 0	$ 8,408	$ 0	$ 8,640
	Number of retirees	0	1	0	1	0	1	0	3
	Average monthly benefit	$ 0	$ 0	$ 2,657	$ 0	$ 4,134	$ 0	$ 4,450	$ 3,747
2013	Average final average salary	$ 0	$ 0	$ 5,314	$ 0	$ 8,267	$ 0	$ 8,900	$ 7,494
	Number of retirees	0	0	1	0	1	0	1	3
	Average monthly benefit	$ 0	$ 2,433	$ 0	$ 0	$ 0	$ 0	$ 0	$ 2,433
2014	Average final average salary	$ 0	$ 8,146	$ 0	$ 0	$ 0	$ 0	$ 0	$ 8,146
	Number of retirees	0	1	0	0	0	0	0	1
	Average monthly benefit	$ 0	$ 2,259	$ 0	$ 3,012	$ 0	$ 0	$ 0	$ 2,636
2015	Average final average salary	$ 0	$ 7,936	$ 0	$ 6,023	$ 0	$ 0	$ 0	$ 6,980
	Number of retirees	0	1	0	1	0	0	0	2
Ten Years Ended June 30, 2015									
	Average monthly benefit	$ 956	$ 2,214	$ 2,695	$ 3,834	$ 4,178	$ 4,204	$ 4,450	$ 3,007
	Average final average salary	$ 8,004	$ 7,693	$ 5,435	$ 7,729	$ 8,356	$ 8,408	$ 8,900	$ 7,187
	Number of retirees	2	4	7	4	3	1	1	22

Note: COLA increases are excluded from the above for comparison purposes.

Average Monthly Benefit Amounts | Ten Years Ended June 30, 2015

Judicial Plan

Members Retiring During Fiscal Year		<5	5-10	11-15	16-20	21-25	26-30	31+	All Members
		Years Credited Service by Category							
2006	Average monthly benefit	$ 592	$ 1,946	$ 4,500	$ 4,000	$ 0	$ 4,396	$ 0	$ 2,930
	Average final average salary	$ 5,875	$ 6,564	$ 9,000	$ 8,000	$ 0	$ 8,792	$ 0	$ 7,496
	Number of retirees	2	2	1	2	0	2	0	9
2007	Average monthly benefit	$ 375	$ 2,121	$ 3,995	$ 4,243	$ 4,390	$ 4,071	$ 4,167	$ 3,846
	Average final average salary	$ 9,000	$ 7,889	$ 7,990	$ 8,486	$ 8,833	$ 8,143	$ 8,333	$ 8,346
	Number of retirees	1	5	5	14	6	7	3	41
2008	Average monthly benefit	$ 381	$ 2,045	$ 4,120	$ 4,828	$ 5,132	$ 4,593	$ 5,186	$ 4,080
	Average final average salary	$ 2,742	$ 6,203	$ 8,276	$ 9,656	$ 10,264	$ 9,186	$ 10,373	$ 8,517
	Number of retirees	1	2	6	3	3	2	1	18
2009	Average monthly benefit	$ 524	$ 1,786	$ 3,663	$ 4,693	$ 5,286	$ 5,181	$ 5,020	$ 3,398
	Average final average salary	$ 6,103	$ 7,469	$ 7,811	$ 9,336	$ 10,572	$ 10,362	$ 10,040	$ 8,323
	Number of retirees	6	2	7	6	3	2	1	27
2010	Average monthly benefit	$ 458	$ 1,333	$ 4,507	$ 4,557	$ 0	$ 5,342	$ 4,973	$ 3,958
	Average final average salary	$ 6,597	$ 8,000	$ 9,577	$ 9,114	$ 0	$ 10,684	$ 9,946	$ 9,265
	Number of retirees	1	1	2	1	0	1	3	9
2011	Average monthly benefit	$ 0	$ 2,188	$ 4,631	$ 4,515	$ 4,869	$ 4,789	$ 4,650	$ 4,336
	Average final average salary	$ 0	$ 7,994	$ 9,322	$ 9,031	$ 9,738	$ 9,577	$ 9,299	$ 9,139
	Number of retirees	0	4	8	9	4	2	5	32
2012	Average monthly benefit	$ 0	$ 2,353	$ 4,561	$ 4,621	$ 0	$ 5,020	$ 0	$ 3,822
	Average final average salary	$ 0	$ 7,797	$ 10,179	$ 9,241	$ 0	$ 10,040	$ 0	$ 9,050
	Number of retirees	0	5	4	4	0	1	0	14
2013	Average monthly benefit	$ 0	$ 2,777	$ 4,234	$ 4,625	$ 5,444	$ 5,452	$ 5,293	$ 4,832
	Average final average salary	$ 0	$ 8,246	$ 8,696	$ 9,251	$ 10,888	$ 10,904	$ 10,585	$ 9,848
	Number of retirees	0	1	6	4	5	4	2	22
2014	Average monthly benefit	$ 0	$ 2,310	$ 4,571	$ 5,151	$ 5,117	$ 4,869	$ 5,293	$ 4,313
	Average final average salary	$ 0	$ 8,259	$ 9,143	$ 10,303	$ 10,233	$ 9,738	$ 10,585	$ 9,435
	Number of retirees	0	4	6	3	3	1	1	18
2015	Average monthly benefit	$ 1,114	$ 3,140	$ 5,572	$ 5,572	$ 5,970	$ 5,572	$ 5,848	$ 5,392
	Average final average salary	$ 11,143	$ 9,419	$ 11,143	$ 11,143	$ 11,940	$ 11,143	$ 11,697	$ 11,253
	Number of retirees	1	3	7	10	7	4	7	39
Ten Years Ended June 30, 2015									
	Average monthly benefit	$ 555	$ 2,257	$ 4,442	$ 4,703	$ 5,207	$ 4,836	$ 5,117	$ 4,242
	Average final average salary	$ 6,488	$ 7,876	$ 9,092	$ 9,402	$ 10,425	$ 9,673	$ 10,234	$ 9,238
	Number of retirees	12	29	52	56	31	26	23	229

Note: COLA increases are excluded from the above for comparison purposes.

Retirees and Beneficiaries
Tabulated by Fiscal Year of Retirement | As of June 30, 2015

MSEP

Fiscal Year of Retirement	Number	Total Annual Benefit	Average Monthly Benefit
1973	1	$ 663	$ 55
1974	3	23,398	650
1975	1	879	73
1976	8	60,069	626
1977	8	81,079	845
1978	17	87,185	427
1979	17	110,936	544
1980	17	137,123	672
1981	34	320,407	785
1982	47	395,739	702
1983	43	497,231	964
1984	69	657,885	795
1985	96	1,023,506	888
1986	135	1,282,012	791
1987	163	1,840,821	941
1988	214	2,871,514	1,118
1989	258	3,935,231	1,271
1990	266	3,847,512	1,205
1991	368	6,380,250	1,445
1992	400	6,324,414	1,318
1993	507	8,042,735	1,322
1994	498	8,173,356	1,368
1995	688	11,888,199	1,440
1996	711	12,808,224	1,501
1997	747	13,265,064	1,480
1998	897	16,169,813	1,502
1999	1,017	18,661,359	1,529
2000	1,110	20,149,980	1,513
2001	2,240	39,386,670	1,465
2002	1,582	24,610,987	1,296
2003	1,679	27,350,010	1,357
2004	2,264	35,992,279	1,325
2005	1,659	24,340,172	1,223
2006	1,832	25,862,430	1,176
2007	2,153	31,354,427	1,214
2008	2,168	30,822,739	1,185
2009	2,281	33,002,311	1,206
2010	2,368	33,420,687	1,176
2011	3,005	44,798,876	1,242
2012	2,826	39,265,977	1,158
2013	2,922	39,246,705	1,119
2014	2,938	39,504,628	1,121
2015	3,228	45,916,355	1,185
	43,485	$653,911,837	$1,253

Retirees and Beneficiaries
Tabulated by Fiscal Year of Retirement | As of June 30, 2015

Judicial Plan

Fiscal Year of Retirement	Number	Total Annual Benefit	Average Monthly Benefit
1976 & prior	1	$ 10,960	$ 913
1977	0	0	0
1978	1	15,726	1,310
1979	0	0	0
1980	1	21,444	1,787
1981	1	65,728	5,477
1982	0	0	0
1983	1	21,064	1,755
1984	1	22,388	1,866
1985	0	0	0
1986	2	86,769	3,615
1987	8	421,051	4,386
1988	5	310,276	5,171
1989	6	356,025	4,945
1990	5	263,891	4,398
1991	11	464,335	3,518
1992	5	241,209	4,020
1993	6	263,497	3,660
1994	6	300,199	4,169
1995	15	1,076,924	5,983
1996	7	318,889	3,796
1997	5	321,096	5,352
1998	19	1,159,189	5,084
1999	17	1,082,622	5,307
2000	18	1,243,431	5,757
2001	17	1,456,958	7,142
2002	14	991,041	5,899
2003	21	1,403,482	5,569
2004	16	998,900	5,203
2005	16	1,166,310	6,075
2006	17	749,111	3,672
2007	55	3,253,037	4,929
2008	30	1,682,503	4,674
2009	35	1,833,316	4,365
2010	15	821,343	4,563
2011	39	2,258,479	4,826
2012	21	983,680	3,903
2013	31	1,909,117	5,132
2014	25	1,371,861	4,573
2015	55	3,557,523	5,390
	548	$32,503,374	$ 4,943

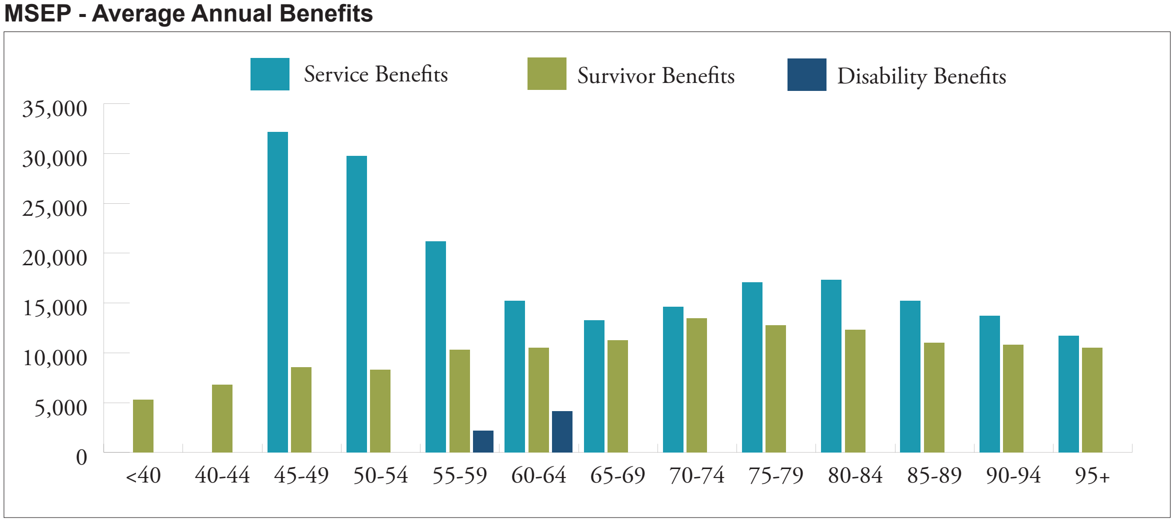
Total Benefits Payable
Tabulated by Attained Ages of Benefit Recipients | As of June 30, 2015

MSEP

Attained Ages	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20					65	$ 219,884	65	$ 219,884
20-24					20	121,198	20	121,198
25-29					8	44,660	8	44,660
30-34					20	114,432	20	114,432
35-39					42	321,242	42	321,242
40-44					86	583,963	86	583,963
45-49	3	$ 96,492			129	1,104,752	132	1,201,244
50-54	507	15,091,968			195	1,621,841	702	16,713,809
55-59	3,567	75,461,929	1	$ 2,184	352	3,633,095	3,920	79,097,208
60-64	8,304	126,403,385	3	12,336	519	5,460,906	8,826	131,876,627
65-69	10,214	135,418,187			672	7,573,561	10,886	142,991,748
70-74	6,563	95,829,330			654	8,788,508	7,217	104,617,838
75-79	4,145	70,815,839			660	8,422,858	4,805	79,238,697
80-84	2,560	44,373,961			674	8,308,368	3,234	52,682,329
85-89	1,503	22,870,721			503	5,539,090	2,006	28,409,811
90-94	606	8,300,300			180	1,947,114	786	10,247,414
95	49	548,804			18	130,066	67	678,870
96	42	533,124			6	110,559	48	643,683
97	20	296,232			11	171,408	31	467,640
98	14	148,975			5	58,716	19	207,691
99	9	99,012			5	33,420	14	132,432
100	7	75,624			4	25,536	11	101,160
101	8	89,240			1	2,436	9	91,676
102	4	16,959			1	3,624	5	20,583
103	3	26,412					3	26,412
104	1	6,939					1	6,939
105	1	6,828					1	6,828
Totals	38,130	$596,510,261	4	$14,520	4,830	$54,341,237	42,964	$650,866,018

Average age at retirement: 60.2 years • Average age now: 69.7 years

MSEP - Average Annual Benefits



Average benefit paid: $15,644 service benefits • $11,251 survivor benefits • $3,630 disability benefits

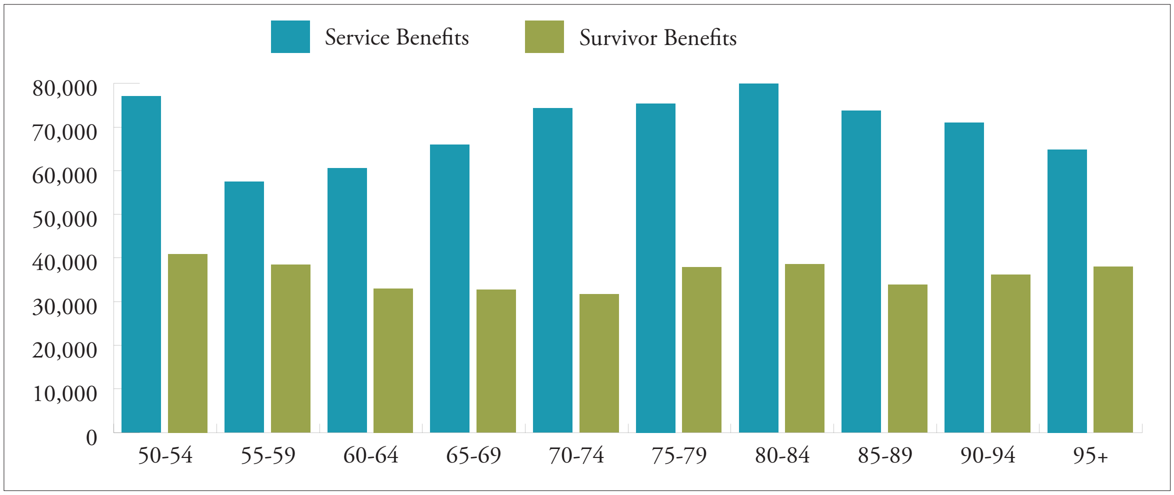
Total Benefits Payable
Tabulated by Attained Ages of Benefit Recipients | As of June 30, 2015

Judicial Plan

	Service Retirement		Survivors and Beneficiaries		Totals	
Attained Ages	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
50-54	1	$ 77,088	4	$ 163,596	5	$ 240,684
55-59	9	517,264	4	153,782	13	671,046
60-64	80	4,844,103	10	329,968	90	5,174,071
65-69	102	6,727,012	19	622,149	121	7,349,161
70-74	81	6,021,371	15	475,363	96	6,496,734
75-79	49	3,693,929	16	605,989	65	4,299,918
80-84	40	3,194,997	34	1,309,532	74	4,504,529
85-89	17	1,252,769	31	1,050,353	48	2,303,122
90-94	9	639,204	12	433,557	21	1,072,761
95+	3	194,556	3	114,012	6	308,568
Totals	391	$27,162,293	148	$5,258,301	539	$32,420,594

Average age at retirement: 65.1 years • Average age now: 75.5 years

Judicial Plan - Average Annual Benefits



Average benefit paid: $69,469 service benefits • $35,529 survivor benefits

Listed below in alphabetical order are the numerous employees who contributed to MOSERS success over the last 20 years. These employees, now enjoying their own retirements, furthered MOSERS' pursuit of excellence and service during their tenure, which is noted below. Their commitment to the organization helped build the solid foundation and steadfast culture now entrusted to future employees responsible for advancing the financial security of members. Employees who will ensure that at MOSERS "the pursuit of excellence never retires."

Barbara Beermann
Senior Educator
2000 - 2015

Hazel Bledsoe
Data Integrity Specialist
1974 - 2014

Barbie Bosch
IT Coordinator
1996 - 2015

Louis Bremer
Computer Operator
1966 - 2003

Judy Delaney
Legislative & Policy Coordinator
1992 - 2015

Mildred Ehrhardt
Membership Clerk
1984 - 1993

Rosie Eppenauer
Assistant Executive Director
1957 - 1996

Gary Findlay
Executive Director
1994 - 2015

Chris Gierer (Rackers)
Manager of Investment Policy & Communication
2005 - 2014

Sally Gillmore
Manager of Member Services
1986 - 1996

Sally Hager
Records & Facility Supervisor
1986 - 2013

Gerald Heller
Special Project Coordinator
1967 - 1996

Jerry Hihn
Facility Specialist
1995 - 2010

Karen Holterman
Senior Operations Specialist
1997 - 2012

Gary Irwin
Chief Finance Officer
1982 - 2013

Betty Kinney
Senior Communications Assistant
1993 - 2013

Sandi Lynn
Manager of Communications
1987 - 2007

Bob Morris
Accountant
1983 - 1998

Diana Mosier
Manager of Administrative Services
1980 - 2007

Jim Mullen
Manager of Derivatives & Internal Management
1995 - 2013

Beverly Murphy
Mailroom Technician
1994 - 2014

Debbie Murphy
Senior Benefit Counselor
2001 - 2009

Robert Peters
Accountant
1985 - 1995

Bette Rovik
Senior Benefit Counselor
1984 - 2011

Stephen Seibold
Benefit Specialist
1986 - 1998

Karen Stohlgren
Deputy Executive Director
1996 - 2015

Randy Woods
IT Coordinator
1987- 2014

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MOSERS is an equal opportunity employer.

★ ★ ★ ★ ★

Missouri state employees have worked hard throughout their careers to provide needed services to the citizens of the state. MOSERS staff is dedicated to making sure that these employees receive the best customer service and investment performance possible as they prepare for and enter their retirement years.

This year I'll become one of those retirees. I'm excited to pass the torch on to such a committed staff. It will be exciting to watch them build on the foundation and take it to new heights. We truly are "in good hands."

— Karen Stohlgren, Retiring Deputy Executive Director - Chief Operations Officer

Years of Service: 1996 - 2015

MOSERS®

Missouri State Employees' Retirement System
PO Box 209, Jefferson City, Missouri
Visit us at 907 Wildwood Drive

Phone: (573) 632-6100 (800) 827-1063 | Fax: (573) 632-6103
Email: *mosers@mosers.org* | Web Address: *www.mosers.org*
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